Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.11.95 Test oil : ISO 4113

Combination No. : 0 402 046 872

Injection pump

Pump designation : PES6P120A320RS3337 EP type number : 0 412 026 770

Governor

Governer design. : RQV300...1250PA1246K

Governer no. : 0 421 815 480

Cust. part No. : CCEP 5155 66-217

Customer-spec. information

Customer : RVI

Motor : MIDR 06-02-26 U4

Power KW : 111.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 135 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.10
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 11.00
Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.80
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 145.0	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: +- 1.0	
Check tolerance		GUIDE SLEEVE POSITION
cm3/1000s.	: + 4.0	Rated speed rpm : 1400
Spreed		Rack travel in mm: 10.50
Tolerance cm3/1000 strokes	: 5.0	Tolerance mm : +- 1.50
Check tolerance cm3/1000s.	: 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm : 1250 Aneroid pressure
Rack travel in mm	· -< nn	hPa : - Del. quantity
Tolerance mm		cm3/1000 strokes : 145.0
Del. quantity cm3/1000 strokes	: 29.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance	Ţ.,	Check tolerance
cm3/1000 strokes	: + 2.0	cm3/1000s. : +- 4.0
Check tolerance cm3/1000s.	: +- 5.0	Spreed Tolerance
Spreed	+	cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes	: 8.0	Check tolerance cm3/1000s. : 9.0
Check tolerance	+	
cm3/1000s.	: 12.0	
	1	CONTROL LEVER
(B) SETTING OF IN.	JECTION PUMP +	control lever
WITH GOVERNOR	I	position degree : 296.0
		tolerance degree : +- 4.0
GUIDE SLEEVE TRAVE	<u> </u>	RATED SPEED
Rated speed rpm	: 300	
guide sleeve travel mm	: 1.31	rack travel mm : -1.00 Rated speed rpm : 1325
Tolerance mm	÷ + 0.20	Tolerance 1/min : + 5
Rated speed rpm	: 1333	rack travel mm : -6.80
guide sleeve	. 1333	Rated speed rpm : 1420
travel mm	: 10.40	Tolerance 1/min : + 15
Tolerance mm	: + 0.15	rack travel mm : -10.30
Rated speed rpm	: 900	Tolerance mm : +- 0.50
guide sleeve travel mm	: 6.50	Rated speed rpm : 1550
Tolerance mm	: + 0.25	
Rated speed rpm guide sleeve	: 530	LOW IDLE
travel mm	: 3.77	
Tolerance mm	: ← 0.25	control lever
Rated speed rpm	: 1580	position degree : 242.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300 rack travel mm : -6.00 Tolerance mm : + 0.10

Rated speed rpm : 200

CRT mm min. : < -5.00

Rated speed rpm : 380

TORQUE CONTROL

Rated speed rpm : 1250

Rated speed rpm : 750 rack travel mm : -1.60 Tolerance mm : + 0.10

Rated speed rpm : 650 rack travel mm : -1.90 Tolerance mm : + 0.15

Rated speed rpm : 400 rack travel mm : -2.50 Tolerance mm : + 0.20

START CUT-OUT

Rated speed rpm : > 130 Rated speed rpm : < 225

Check

speed 1/min :> 110

Check

speed 1/min : < 245

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 750

Del. quantity

cm3/1000 strokes : 107.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 94.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

BREAKAWAY

Rack travel in mm: -1.00
Rated speed rpm: 1325
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 112.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300 rack travel mm -6.00: +- 0.20 Toterance mm Del. quantity cm3/1000 strokes : 29.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 14,11.95

Test oil

: ISO 4113

Combination No. : 0 402 048 705

Injection pump

Pump designation : PES8P120A320RS3199

EP type number : 0 412 028 705

Governor

Governer design. : RQV275...1050PA665

Governer no. : 0 421 813 370

Cust. part No. :

Customer-spec. information

Customer

: RVI

Motor

: MIVRO83530

Power KW

: 320.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure bar

208.5

Tolerance bar

1.5

Test lines

: 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 3.55 : + - 0.05Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-8-4-2-7

: - 3- 6- 5

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : + - 0.50

Start of delivery mark

*NW after s.o.d. : 13.00 Tolerance : +- 0.50

Check

tolerance "NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 11.45 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

203.0

		+	Tolerance mm	: +- 0.50
Tolerance cm3/1000 strokes	: + 1.0	+		
			GUIDE SLEEVE POS	ITION
Check tolerance cm3/1000s.	: +- 4.0	‡	Rated speed rpm	: 1250
Spreed			Rack travel in m	n: 10.45
Tolerance cm3/1000 strokes	: 5.0	‡	Tolerance mm	: + 1.30
Check tolerance			FULL LOAD DELIVE	RY AT FULL LO
cm3/1000s.	: 9.0	+	Datail amond man	: 1050
Rated speed rpm	: 275	Ţ	Rated speed rpm Aneroid pressure hPa	
Rack travel in m	m: -7.50	4	Del. quantity	. ,55
Tolerance mm	: +- 0.20	+	cm3/1000 strokes	: 203.0
Del. quantity cm3/1000 strokes	: 20,0	1	Tolerance cm3/1000 strokes	: + 1.0
Tolerance		1	Check tolerance	
cm3/1000 strokes	: +- 3.0	+	cm3/1000s.	: +- 4.0
Check tolerance cm3/1000s.	: +- 6.0	1	Spreed Tolerance	
Spreed	0.0	I	cm3/1000 strokes	: 5.0
Tolerance		<u> </u>	Check tolerance	
cm3/1000 strokes	: 8.0	7	cm3/1000s.	: 9.0
Check tolerance		+		
cm3/1000s.	: 12.0	†		
(B) SETTING OF IN	NJECTION PUMP	† † †	control lever position degree tolerance degree	
GUIDE SLEEVE TRAN	/El	I	toterance degree	; +- 4.0
COINT OFFICE LIVE		1	control lever	
Rated speed rpm	: 275	+	position degree	
guide sleeve	2.00	+	tolerance degree	: +- 4.0
travel mm Tolerance mm	: 0.89 : +- 0.20	Ī	RATED SPEED	
roter arise time		1	, , , , , , , , , , , , , , , , , , ,	
Rated speed rpm	: 1135	†.	rack travel mm	
guide sleeve	: 8.32	†	Rated speed rpm Tolerance 1/min	
travel mm Tolerance mm	: +- 0.15	I	roterance minn	, +-)
10tot di loc timi		+	rack travel mm	: -7.45
Rated speed rpm	: 781	+	Rated speed rpm	
guide sleeve	F 40	+	Tolerance 1/min	: +- 15
travel mm Tolerance mm	: 5.68 : ← 0.25	Í	rack travel mm	: -10.95
loterance mm	: 0.25	I	Tolerance mm	: +- 0.50
Rated speed rpm	: 480	+	Rated speed rpm	: 1350
guide sleeve		+		
travel mm	: 3.60	+		
Tolerance mm	: +- 0.25	Ť	LOW IDLE	****
Rated speed rpm	: 1430	Į	TOM INTE	
guide sleeve		+		
travel mm	: 11.50	+		

GUIDE SLEEVE POST	ITION
Rated speed rpm	: 1250
Rack travel in mm Tolerance mm	n: 10.45 : + 1.30
FULL LOAD DELIVER	RY AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1050
hPa Del. quantity	: 700
cm3/1000 strokes Tolerance	: 203.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
CONTROL LEVER	
control lever	: 65.0
position degree tolerance degree	: +- 4.0
control lever position degree	: 300.0
tolerance degree	
RATED SPEED	
rack travel mm Rated speed rpm	: -1.00 : 1120 _
Tolerance 1/min	: +- 5
rack travel mm Rated speed rpm	: -7.45 : 1225
Tolerance 1/min	: +- 15
rack travel mm Tolerance mm	: -10.95 : +- 0.50

control lever	. 245.0	Check speed 1/min :> 80
tolerance degree		Check speed 1/min : < 215
control lever position degree	. 10.0	Speed 1/11/13
tolerance degree	: + 4.0	FUEL DELIVERY CHARACTERISTICS
Testing:	-	Aneroid pressure hPa : 700
Rated speed rpm rack travel mm		Rated speed rpm : 650
Tolerance mm		Del. quantity cm3/1000 strokes : 192.0 Tolerance
Rated speed rpm	: 200	cm3/1000 strokes : +- 4.0
CRT mm max.	: < -5.80	Check tolerance cm3/1000s. : +- 7.0
Rated speed rpm	: 343	Aneroid pressure
TOPOUE CONTROL		hPa : - Rated speed rpm : 500
TORQUE CONTROL	. 1050	Del. quantity cm3/1000 strokes : 111.0 Tolerance
Rated speed rpm	+	cm3/1000 strokes : +- 1.0
Rated speed rpm	; 630	Check tolerance cm3/1000s. : +- 4.0
ANEROID/ALTITUDE		
COMPENSATOR TEST	‡	BREAKAWAY
SETTING	‡	Rack travel in mm : -1.00 Rated speed rpm : 1120
Rated speed rpm Pressure hPa	: 500 : 700	Tolerance 1/min : +- 5
MEASUREMENT		STARTING FUEL DELIVERY
Pressure hPa	:	
Rated speed rpm rack travel mm	: 500 + : -2.60 +	Del. quantity
Tolerance mm	: + 0.10	cm3/1000 strokes : 175.0 Tolerance
Rated speed rpm	: 500	cm3/1000 strokes : +- 15.0 Check tolerance
Pressure hPa rack travel mm	: 360 : -1.90	cm3/1000s. : +- 19.0
Tolerance mm	: + 0.10	
Pressure hPa	: 420 : -0.75	LOW IDLE
Pressure hPa rack travel mm Tolerance mm	: 420 : -0.75 : + 0.05	LOW IDLE Rated speed rpm : 275
rack travel mm Tolerance mm	: -0.75	Rated speed rpm : 275 rack travel mm : -7.50
rack travel mm	: -0.75	Rated speed rpm : 275

Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 13.11.95 Edition Test oil : ISO 4113

Combination No. : 0 402 076 758

Injection pump

Pump designation : PES6P120A720RS3322 EP type number : 0 412 026 764

Governor

Governer design. : RSV650...1250P8A566

Governer no. : 0 421 833 415

Cust. part No. :

Customer-spec. information

Customer : FNH-GEOTECH

: 164.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

40 temp. °C Tolerance °C

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 089

8.0 Outside diameter :

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.60 : + 0.05 Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.50

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 131.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s.

: +- 4.0

80A

Spreed	+
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. 9.0	control lever position degree : 172.0 tolerance degree : +- 4.0
Rated speed rpm : 650	RATED SPEED
Rack travel in mm : 4.40 Tolerance mm : + 0.20 Del. quantity	Rated speed rpm : 1330
cm3/1000 strokes : 19.0	ASSEMBLY GOVERNOR SETTING
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	Rated speed rpm : 1293 rack travel mm : 9.05
cm3/1000s. : + 6.0 Spreed	+ Rated speed rpm : 1325
Tolerance cm3/1000 strokes : 8.0 Check tolerance	Tolerance 1/min : + 5 rack travel mm : 4.00
cm3/1000s. : 12.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1500
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1294 rack travel mm : 9.05
GUIDE SLEEVE POSITION	Rated speed rpm : 1326 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20	rack travel mm : 0.85 Tolerance mm : + 0.55
governor spring pre-tension	Rated speed rpm : 1295 rack travel mm : 9.05
click setting x : 1.75	Rated speed rpm : 1327 Tolerance 1/min : + 5 rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
Aneroid pressure hPa : 1000 Del. quantity	Rated speed rpm : 1296 rack travel mm : 9.05
cm3/1000 strokes : 131.0 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1328 Tolerance 1/min : + 5
Check tolerance cm3/1000s. : +- 4.0	rack travel mm : 4.00
Spreed Tolerance cm3/1000 strokes : 5.0	Tolerance mm : +- 0.55
Check tolerance cm3/1000s. 9.0	Rated speed rpm : 1297 rack travel mm : 9.05
	Rated speed rpm : 1329 Tolerance 1/min : + 5

rack travel mm : 4.00	t
rack travel mm : 0.85 Tolerance mm : + 0.55	ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 1298 rack travel mm : 9.05	SETTING
Rated speed rpm : 1330 Tolerance 1/min : + 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55	Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 10.60 Tolerance mm : +- 0.10 MEASUREMENT
LOW IDLE	Pressure hPa : - Rated speed rpm : 500 rack travel mm : 7.60 Tolerance mm : + 0.10
control lever position degree : 85.0 tolerance degree : +- 4.0 Setting point w/out bumper spring	Rated speed rpm : 500 Pressure hPa : 560 rack travel mm : 9.80
Rated speed rpm : 650 rack travel mm : 3.90	Tolerance mm : + 0.05
Testing:	START CUT-OUT Rated speed rpm : > 100
Rated speed rpm : 650 rack travel mm : 4.40 Tolerance mm : + 0.10	Check speed 1/min :> 80
rack travel mm : 2.00 Rated speed rpm : 770 Tolerance 1/min : + 50	FUEL DELIVERY CHARACTERISTICS Aneroid pressure
TORQUE CONTROL	hPa : 1000 Rated speed rpm : 900 Del. quantity
Rated speed rpm : 1250 rack travel mm : 10.05 Tolerance mm : + 0.05	cm3/1000 strokes : 144.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Rated speed rpm : 900 rack travel mm : 10.60 Tolerance mm : +- 0.10	+ cm3/1000s. : + 6.0 + Aneroid pressure
Rated speed rpm : 1160 rack travel mm : 10.35 Tolerance mm : + 0.10	hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 83.0
Rated speed rpm : 700 rack travel mm : 10.60	Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Tolerance mm : +- 0.10	+ cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 215.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 650 rack travel mm 4.40 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition

: 15,11.95

Test oil

: ISO 4113

Combination No. : 0 402 648 795

Injection pump

Pump designation : PE8P120A320LS7873 EP type number : 0 412 628 880

Governor

Governer design. : RQV300...1050PA1258K

Governer no.

: 0 421 815 490

Cust. part No.

: 04223330KY0165-17

Customer-spec. information

Customer

: KHD

Motor

: BF8M1015/c

Power KW

: 400.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 1 417 413 025

Inlet press. bar :

1.5

Tolerance bar

0.1

Overflow quantity

min. L/h

115

Tolerance l/h

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: +-1.5

Test lines : 1 680 750 075

Outside diameter :

8.0

x inside diameter :

3.0

x length mm

: 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm 4.05

Tolerance mm : +- 0.05

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50

: + 1.50 Tolerance mm

: 1-8-7-2-6 Firing order

: - 5- 4- 3

Phasing : 0-45-90-135-180

: -225-270-315 : + - 0.30

Tolerance Check

tolerance "NW

: +- 0.50

Start of delivery mark

Tolerance

: +- 0.50

Check

tolerance "NW

: + 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm

1050

14.70 Rack travel in mm:

Tolerance mm

: +- 0.05

Del. quantity cm3/1000 strokes	: 360.0	travel mm : 13.50 Tolerance mm : + 0.50
Tolerance cm3/1000 strokes	: + 1.0	
Ot . 1 . 1		+ GUIDE SLEEVE POSITION
Check tolerance cm3/1000S.	: + 4.0	Rated speed rpm : 1175
Spreed		Rack travel in mm: 13.70
Tolerance		+ Tolerance mm : +- 1.50
cm3/1000 strokes	: 6.0	†
Check tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000S.	: 9.0	TOLL LOAD DELIVERY AT TOLL LOAD GTO
		Rated speed rpm : 1050
Rated speed rpm	: 300	+ Aneroid pressure
Rack travel in mm	: 4.80	hPa : 1000
Tolerance mm		Del. quantity
Del. quantity		+ Tolerance
cm3/1000 strokes	: 23.0	+ cm3/1000 strokes : + 1.0
Tolerance		+ Check tolerance
cm3/1000 strokes	: +- 3.0	+ cm3/1000s. : +- 4.0
Check tolerance cm3/1000s.	: +- 6.0	+ Spreed + Tolerance
Spreed		+ cm3/1000 strokes : 6.0
Tolerance		+ Check tolerance
cm3/1000 strokes	: 8.0	+ cm3/1000s. : 9.0
Check tolerance cm3/1000s.	: 12.0	†
CIBY TOUGS.	: 12.0	
		+ CONTROL LEVER
(B) SETTING OF IN	JECTION PUMP	+
WITH GOVERNOR		control lever
		<pre>position degree : 119.0 tolerance degree : + 4.0</pre>
GUIDE SLEEVE TRAVE	EL	toterance degree 4.0
		RATED SPEED
Rated speed rpm	: 300	17.70
guide sleeve	: 1.60	rack travel mm : 13.70 Rated speed rpm : 1085
travel mm Tolerance mm	: + 0.20	+ Tolerance 1/min : +- 5
TOCCI WITO INIT		Total article training
Rated speed rpm	: 1097	+ rack travel mm : 4.00
guide sleeve	. 40.07	Rated speed rpm : 1200
travel mm Tolerance mm	: 10.07 : + 0.15	Tolerance 1/min : +- 15
roterance inii	. += 0.15	Track travel mm : 0.50
Rated speed rpm	: 796	+ Tolerance mm : +- 0.50
guide sleeve		+ Rated speed rpm : 1350
travel mm	: 6.87	+
Tolerance mm	: +- 0.25	
Rated speed rpm	: 510	LOW IDLE
guide sleeve		+
travel mm	: 4.02	+
Tolerance mm	: + 0.25	control lever
Datad apad apr	: 1340	<pre>+ position degree : 71.0 + tolerance degree : + 4.0</pre>
Rated speed rpm	1340	+ tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300 rack travel mm : 4.80 Tolerance mm : + 0.10

Rated speed rpm : 200

CRT mm max. : > 6.30

Rated speed rpm : 350

TORQUE CONTROL

Rated speed rpm : 1050 rack travel mm : 14.70 Tolerance mm : + 0.05

Rated speed rpm : 800 rack travel mm : 14.00 Tolerance mm : + 0.25

Rated speed rpm : 600 rack travel mm : 12.70 Tolerance mm : + 0.25

Rated speed rpm : 450 rack travel mm : 11.40 Tolerance mm : + 0.25

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1050
Pressure hPa : 1000
rack travel mm : 14.70
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 1050
rack travel mm : 8.90
Tolerance mm : +- 0.20

Rated speed rpm : 1050

Pressure hPa : 500 rack travel mm : 11.95 Tolerance mm : + 0.10

Pressure hPa : 800 rack travel mm : 14.10 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 400

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm: 13.70
Rated speed rpm: 1085
Tolerance 1/min: + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 8.90
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 155.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm	:	300
rack travel mm	:	4.80
Tolerance mm	: +-	0.20
Del. quantity		
cm3/1000 strokes	:	23.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000S.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.11.95 Test oil : ISO 4113

Combination No. : 0 402 744 804

Injection pump

Pump designation : PES4P120A320RS7402

EP type number : 0 412 724 804

Governor

Governer design. : RQV275...1200PA1257K

Governer no. : 0 421 815 494

Cust. part No. : CCEP 5154 66-238

Customer-spec. information

Customer : RVI
Motor : MIDR 04-02-26 A4

Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.20
Tolerance mm : + 0.05

Check

tolerance mm : ← 0.10

Rack travel in mm: 13.00 Tolerance mm: + 0.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 13.10

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 245.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. :	÷ 4.0 ‡	Rated speed rpm :	1450
Spreed	1	Rack travel in mm :	
Tolerance	<u> </u>	Tolerance mm :	
cm3/1000 strokes :	5.0		
Check tolerance cm3/1000s.	9.0	FULL LOAD DELIVERY	AT FULL LOAD STOP
	+		1200
Rated speed rpm :	325	Aneroid pressure hPa :	1200
Rack travel in mm :		Del. quantity	
Tolerance mm : Del. quantity	+ 0.20	cm3/1000 strokes : Tolerance	245.0
cm3/1000 strokes :	28.0	cm3/1000 strokes :	+ 1.0
Tolerance cm3/1000 strokes :	± 2.0	Check tolerance cm3/1000s.	+- 4.0
Check tolerance	+	Spreed	7.0
cm3/1000s. :	+- 6.0	Tolerance cm3/1000 strokes :	5.0
Toterance	+	Check tolerance	
cm3/1000 strokes : Check tolerance	8.0	cm3/1000s. :	9.0
cm3/1000s. :	12.0		
	Ţ	CONTROL LEVER	
(B) SETTING OF INJECT WITH GOVERNOR	TION PUMP	control lever	
WITH GOVERNOR	Ī	position degree :	
GUIDE SLEEVE TRAVEL		tolerance degree :	+- 4.0
	+	RATED SPEED	
Rated speed rpm : guide sleeve	325	rack travel mm :	-1.00
travel mm :	1.52	Rated speed rpm :	1260
Tolerance mm :	+ 0.20	Tolerance 1/min :	+- 5
Rated speed rpm :	1260	rack travel mm :	-9.10
guide sleeve travel mm :	10.32	Rated speed rpm : Tolerance 1/min :	+ 15
	+- 0.15		
Rated speed rpm :	938		-12.60 +- 0.50
guide steeve	+		1500
	6.86 + 0.25		
	+		
Rated speed rpm : guide sleeve	550	LOW IDLE	
travel mm :	3.92		
Tolerance mm :	+ 0.25	control lever position degree :	252.0
Rated speed rpm : guide sleeve	1650	tolerance degree :	
travel mm :	13.50	Testing:	
Tolerance mm :	÷ 0.50 ‡	Rated speed rpm :	325
CITATE OF THE PROPERTY		rack travel mm :	-8.40
GUIDE SLEEVE POSITION	Y +	Tolerance mm :	+ 0.10

		+
Rated speed rpm	: 225	Aneroid pressure
CRT mm min.	: < 6.90	+ hPa : 1200 + Rated speed rpm : 850
Off the title.	. \ 0.70	No.1 - mandala.
Rated speed rpm	: 390	- cm3/1000 strokes : 235.0
		+ Tolerance + cm3/1000 strokes : +- 3.0
TORQUE CONTROL		Check tolerance
· ·		+ cm3/1000s. : +- 6.0
Rated speed rpm	: 1200	Anomaid procesure
Rated speed rpm	: 850	Aneroid pressure hPa : - Rated speed rpm : 1200 Del. quantity cm3/1000 strokes : 183.0 Tolerance cm3/1000 strokes : + 1.0
rack travel mm	: -1.05	Rated speed rpm : 1200
Tolerance mm	: + 0.10	Del. quantity
Rated speed rpm	: 700	+ cm3/1000 strokes : 183.0 + Tolerance
rack travel mm	: -1.85	+ cm3/1000 strokes : + 1.0
Tolerance mm	: +- 0.20	+ Check tolerance
		- cm3/1000s. : + 4.0
ANEROID/ALTITUDE		
COMPENSATOR TEST		BREAKAWAY
		Ţ
SETTING		+ Rack travel in mm : -1.00
Dated aread non	. 1200	+ Rated speed rpm : 1260 + Tolerance 1/min : + 5
Rated speed rpm Pressure hPa	: 1200	† Tolerance 1/min : +- 5
	• • • • • • • • • • • • • • • • • • • •	\$
		†
MEASUREMENT		CTADITAIC CHEL DELTHEDY
	: -	STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm	: -	+ Rated speed rpm : 100
Pressure hPa Rated speed rpm rack travel mm	: -2.70	Rated speed rpm : 100 Del. quantity
Pressure hPa Rated speed rpm	: -2.70	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0
Pressure hPa Rated speed rpm rack travel mm	: -2.70 : + 0.20	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: -2.70 : + 0.20 : 1200	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa	: -2.70 : + 0.20 : 1200 : 200	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: -2.70 : + 0.20 : 1200	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT	-2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm	-2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT	-2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0 Tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min	-2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 6.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check	-2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05 : > 130 : < 275 : > 110	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 6.0 Spreed
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min	: -2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 6.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check	-2.70 : + 0.20 : 1200 : 200 : -2.00 : + 0.20 : 440 : -0.70 : + 0.05 : > 130 : < 275 : > 110 : < 285	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0 LOW IDLE Rated speed rpm : 325 rack travel mm : -8.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 28.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 15, 11, 95

Test oil

: ISO 4113

Combination No. : 0 402 746 603

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ300/1050PA999-7

Governer no. : 0 421 801 799

Cust. part No. : CCEP 5153 66-224

Customer-spec. information

Customer

: RVI

Motor

: MIHRO62045 A41

Power KW

: 185.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 417 413 078

Inlet press. bar :

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 008

Outside diameter :

6.0

x inside diameter:

2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm

4.70

Tolerance mm

: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.25

Tolerance mm : + 0.75

Firing order

: 1-5-3-6-2-: 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.30

Check

tolerance °NW

: + 0.50

Start of delivery mark

Tolerance

: +- 0.50

Check

tolerance "NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm :

600

12.30

Rack travel in mm :

Tolerance mm : +- 0.05 Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 191.0

Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1380
Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Spreed Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 800
cm3/1000s. : 9.0	Rack travel in mm: 20.00 Tolerance mm: + 0.80
Rated speed rpm : 275	1
Rack travel in mm : -6.10 Tolerance mm : + 0.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 34.0	† Rated speed rpm : 600 † Aneroid pressure
Tolerance cm3/1000 strokes : +- 2.0	hPa : 1000 Del. quantity
Check tolerance cm3/1000S. : + 5.0	+ cm3/1000 strokes : 191.0 + Tolerance
Spreed Tolerance	+ cm3/1000 strokes : + 1.0 + Check tolerance
cm3/1000 strokes : 8.0 Check tolerance	+ cm3/1000s. : + 4.0 + Spreed
cm3/1000s. : 12.0	Tolerance : 5.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 275 guide sleeve travel mm : 1.75 Tolerance mm : + 0.20 Rated speed rpm : 1145	control lever position degree : 276.0 tolerance degree : + 4.0 RATED SPEED
guide steeve	rack travel mm : -1.00
travel mm : 6.55 Tolerance mm : + 0.15	+ Rated speed rpm : 1138 Tolerance 1/min : + 5
Rated speed rpm : 1050 guide sleeve travel mm : 6.00	rack travel mm : -8.30 Rated speed rpm : 1265 Tolerance 1/min : +- 15
Tolerance mm : + 0.10	t rack travel mm : -11.80
Rated speed rpm : 594 guide sleeve	Tolerance mm : + 0.50 Rated speed rpm : 1375
travel mm : 5.11 Tolerance mm : + 0.10	
Rated speed rpm : 720 guide sleeve	LOW IDLE
travel mm : 6.00 Tolerance mm : + 0.10	‡

		1	
control lever position degree tolerance degree	: 255.0 : + 4.0	T	Check speed 1/min :> 80 Check
Testing:		‡	speed 1/min : < 215
Rated speed rpm rack travel mm Tolerance mm	: -6.10	‡ ‡	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1000
rack travel mm Rated speed rpm Tolerance 1/min	: -10.30 : 520 : + 20	+	Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 198.0 Tolerance
Rated speed rpm	: 175	Ī	cm3/1000 strokes : +- 3.0 Check tolerance
CRT mm min.	: > -4.20	+	cm3/1000s. : +- 6.0
TORQUE CONTROL Rated speed rpm Tolerance mm	: 600 : +- 0.05	+	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 156.0
Rated speed rpm Tolerance mm	: 1050 : +- 0.10	+	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		+	BREAKAWAY
SETTING Rated speed rpm Pressure hPa	: 500 • 1000	+++++++++++++++++++++++++++++++++++++++	Rack travel in mm: -1.00 Rated speed rpm: 1138 Tolerance 1/min: +- 5
MEASUREMENT	. 1003	Ţ	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: -0.20 : -1.10 : + 0.20 : 500 : 140 : -0.65 : + 0.15	+++++++++++++++++++++++++++++++++++++++	STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 155.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0
Pressure hPa rack travel mm Tolerance mm	: 200 : -0.25 : + 0.05	†	LOW IDLE Rated speed rpm : 275
START CUT-OUT Rated speed rpm Rated speed rpm	: > 100 : < 195		rack travel mm : -6.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 34.0

Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 15.11.95 : ISO 4113

Combination No. : 0 402 746 953

Injection pump

Pump designation : PES6P120A320RS7294

EP type number : 0 412 726 895

Governor

Governer design. : RQV275...1000PA1001

: -1

Governer no.

: 0 421 813 936

Cust. part No. : CCEP-5135 66-213

Customer-spec, information

Customer

: RVI

Motor

: MIDR 063540 J/3

Power KW

: 306.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar :

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test lines

: 1 680 750 089

Outside diameter : 8.0

x inside diameter:

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 4.55 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 13.50

Tolerance mm

: +- 0.50

Firing order

: 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance °NW : + - 0.50

Start of delivery mark

Tolerance

: ← 0.50

Check

tolerance "NW

: + 0.70

Barrel no.

: 1

BASIC SETTING

Rated speed rpm :

600

Rack travel in mm: 13.80

Tolerance mm : + 0.05

	+ Rated speed rpm : 393
Del. quantity	+ guide sleeve
cm3/1000 strokes : 312.0	travel mm : 2.99
Tolerance	† Tolerance mm : +- 0.20
cm3/1000 strokes : +- 1.0	Rated speed rpm : 490
	guide sleeve
Check tolerance	+ travel mm : 3.81
cm3/1000s. : +- 4.0	+ Tolerance mm : +- 0.20
	1270
Spreed Tolerance	Rated speed rpm : 1370
cm3/1000 strokes : 5.0	+ guide sleeve + travel mm : 11.50
CHAP (OGD SEI ORCS : J.O	+ Tolerance mm : + 0.50
Check tolerance	+
cm3/1000s. : 9.0	
	+ GUIDE SLEEVE POSITION
Rated speed rpm : 300	Patral annual mass
Rack travel in mm : -8.60	+ Rated speed rpm : 1185
Tolerance mm : + 0.20	Rack travel in mm: 12.60
Del. quantity	+ Tolerance mm : +- 1.30
cm3/1000 strokes : 31.0	1
Tolerance	
cm3/1000 strokes : +- 2.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : +- 6.0	+ Rated speed rpm : 600
Spreed	+ Rated speed rpm : 600 + Aneroid pressure
Tolerance	+ hPa : 1000
cm3/1000 strokes : 8.0	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 312.0
cm3/1000s. : 12.0	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION PUMP	+ Check tolerance + cm3/1000s. : +- 4.0
WITH GOVERNOR	+ Spreed
Wall dotallion	+ Tolerance
	- cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL	+ Check tolerance
275	+ cm3/1000s. : 9.0
Rated speed rpm : 275 guide sleeve	<u>†</u>
travel mm : 1.29	I
Tolerance mm : + 0.10	↓ CONTROL LEVER
	+
Rated speed rpm : 1086	+ control lever
guide sleeve	+ position degree : 302.0
travel mm : 8.46 Tolerance mm : + 0.10	tolerance degree : +- 4.0
Toterance man . Toto	T RATED SPEED
Rated speed rpm : 773	TATES OF CES
guide sleeve	+ rack travel mm : -1.00
travel mm : 6.09	+ Rated speed rpm : 1080
Tolerance mm : + 0.20	+ Tolerance 1/min : + 5
Retail speed spm . 7/7	† rack travel mm : -9.70
Rated speed rpm : 343 guide sleeve	+ Rated speed rpm : 1220
travel mm : 2.33	Tolerance 1/min : +- 15
Tolerance mm : + 0.20	+
	† rack travel mm : -13.25

Tolerance mm Rated speed rpm		rack travel mm : -0.95 Tolerance mm : +- 0.05
LOW IDLE		- START CUT-OUT
2011 2002		Rated speed rpm : > 100 Rated speed rpm : < 225
control lever position degree tolerance degree Testing:		Check
resting.		T speed (7)11(1) 243
Rated speed rpm rack travel mm Tolerance mm	: -8.60	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 200	+ Aneroid pressure + hPa : 1000 + Rated speed rpm : 1000
CRT mm max.	: < -7.20	+ Del. quantity
Rated speed rpm	: 370	+ cm3/1000 strokes : 289.0 + Tolerance
		+ cm3/1000 strokes : + 3.0 - + Check tolerance
TORQUE CONTROL		+ cm3/1000s. : +- 6.0
Rated speed rpm	: 600	Aneroid pressure
Rated speed rpm Tolerance mm		Rated speed rpm : 500 Del. quantity
Rated speed rpm rack travel mm	: 500 : -5.50	+ cm3/1000 strokes : 138.0 + Tolerance + cm3/1000 strokes : +- 5.0
Tolerance mm		Check tolerance + cm3/1000s. : + 8.0
ANEROID/ALTITUDE COMPENSATOR TEST		- Spreed Tolerance cm3/1000 strokes : 8.0
SETTING		t Check tolerance cm3/1000s. : 12.0
	500	Aneroid pressure
Rated speed rpm Pressure hPa	: 500 : 1000	hPa : - Rated speed rpm : 500
MEASUREMENT		+ Del. quantity + cm3/1000 strokes : 152.0 + Tolerance
Pressure hPa Rated speed rpm	: — : 500	cm3/1000 strokes : +- 1.0
rack travel mm Tolerance mm	: -5.00 : +- 0.20	cm3/1000s. : +- 4.0
Rated speed rpm	: 500	BREAKAWAY
Pressure hPa rack travel mm Tolerance mm	: 240 : -3.80 : +- 0.20	Rack travel in mm: -1.00 Rated speed rpm: 1080
Pressure hPa	: 600	Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm	:	300
rack travel mm	:	-8.60
Tolerance mm	: +	0.20
Del. quantity		
cm3/1000 strokes	•	31.0
Tolerance	·	0
cm3/1000 strokes		2.0
Check tolerance	• '	2.0
cm3/1000s.		6.0
		0.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.11.95 Test oil : ISO 4113

Combination No. : 0 402 996 307

Injection pump

Pump designation : PES6P120A720RS8512

: -2

EP type number : 0 412 926 212

Governor

Governer design. : RE30

Governer no. : 0 421 890 024

Cust. part No. : CCEP 5156 66-242

Customer-spec. information

Customer : RVI

Motor : 062465A42B42C42

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 3.0 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.20

Check

tolerance mm : \leftarrow 0.10

Check

tolerance mm : + 0.10

Rack travel in mm: 12.00

Rack travel in mm : 12.00
Tolerance mm : + 0.20
Tolerance mm : + 0.20

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Barrel no. : 1

(B) POSITIONER TESTING ENGINE-SPEED SENSOR Warm-up time: 3 minutes at (All P and R pumps not n=600 min-1, Uact = 2.5 VH and M pumps) Test with control rod TESTING & SETTING RACK TRAVEL SENSOR in stop position POSITION Engine speed min-1: 60 Engine speed min-1: Amplitude V 1.4 Tolerance V : +/- 0.6 Setting point Check (P, R and H pump) tolerance V : +/- 1.20 Uact V 3.100 Engine speed min-1: 600 CRT mm 13.00 Difference Amplitude to Tolerance mm : +/- 0.05 Check Amplitude V : max.1.4 : +/- 0.10 tolerance mm Check value (C) INJECTION PUMP WITH POSITIONER (P, R and H pump) TEST POINT V1 1.700 Uact V : CRT mm 6.15 Rated speed rpm 900 3.050 Tolerance mm : +/- 0.25 Uact V Check Del. quantity : +/- 0.30cm3/1000 strokes : 310.0 tolerance mm Tolerance cm3/1000 strokes : +- 1.0 Check tolerance Setting point (m pump) cm3/1000s. 5.0 Spreed Uact V 3.100 Tolerance 12.50 cm3/1000 strokes : 8.0 CRT mm Check tolerance Tolerance mm : +/- 0.05 cm3/1000s. Check 14.0 : +/- 0.10tolerance mm FUEL DELIVERY CHARACTERISTICS Check value Rated speed rpm 625 (qmuq M) Uact V 3.260 1.700 Del. quantity Uact V cm3/1000 strokes : 5.50 392.0 CRT mm : +/- 0.25 Tolerance mm Tolerance cm3/1000 strokes : + 10.0Check Check tolerance : +/- 0.30 tolerance mm cm3/1000s. : + 12.0Spreed Stop position Tolerance : Value with cm3/1000 strokes : 16.0 Uact V deenergised adjusting magnet Check tolerance and control rod in cm3/1000s. 18.0 stop position. 0.75 TEST POINT L1 CRT mm : +/- 0.25 Tolerance mm Rated speed rpm 325 Check : +/- 0.35 Uact V 1.310 tolerance mm

Tolerance Volt : + 0.060
Check tolerance
Volt : + 0.070
Del. quantity
cm3/1000 strokes : 33.0
Tolerance
cm3/1000 strokes : + 3.0
Spreed
Tolerance
cm3/1000 strokes : + 3.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Uact V	:	4.700
Del. quantity		
	:	195.0
Tolerance		
cm3/1000 strokes	: +-	19.0
Check tolerance		
cm3/1000S.	: +-	22.0
Spreed		
Tolerance		
cm3/1000 strokes	:	40.0
Check tolerance		
cm3/1000s.	:	50.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 09,11,95 : ISO 4113

Combination No. : 0 403 246 054

Injection pump

Pump designation : PES6MW100/720RS1526

EP type number : 0 413 206 025

Governor

Governer design. : RQV300...1300MW154

wverner no.

: 0 420 083 341

Cust. part No. : 0260748702

Customer-spec. information : MB-NFZ

Customer Motor

: 0M366LA

Power KW

: 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve

: 1 419 992 198

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 089

Outside diameter :

8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

4.55 Prestroke mm : + 0.05

Tolerance mm

Check tolerance mm : + 0.10

Rack travel in mm: 20.00

: + 1.00 Tolerance mm

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance

: + 0.50

Check

tolerance °NW

s + 0.75

BASIC SETTING

Rated speed rpm 1300

Rack travel in mm : 11.90 Tolerance mm

: + 0.05

Del. quantity

cm3/1000 strokes : 98.0

Tolerance

cm3/1000 strokes : +--

1.0

Check tolerance cm3/1000s.

* +--3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

	+ Rated speed rpm : 1445
Check tolerance	+
cm3/1000s. : 6.0	+ Rack travel in mm : 10.00 + Tolerance mm : + 2.70
Rated speed rpm : 300	- Cocci di soci mani
Rack travel in mm : 4.00	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : +- 0.20	T TOLE LOAD DELIVERY AT THE EDAD STOP
Del. quantity	Rated speed rpm : 1300
cm3/1000 strokes : 12.0 Tolerance	+ Aneroid pressure + hPa : 1000
cm3/1000 strokes : +- 2.0	Del. quantity
Check tolerance	+ cm3/1000 strokes : 98.0
cm3/1000s. : +- 4.5	+ Tolerance
Spreed Tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : 3.5	+ cm3/1000s. : +- 3.0
Check tolerance	+ Spreed
cm3/1000s. : 5.5	+ Tolerance + cm3/1990 strokes : 3.5
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 6.0
WITH GOVERNOR	<u>†</u>
GUIDE SLEEVE TRAVEL	+ CONTROL LEVER
Rated speed rpm : 300	+ control lever
guide sleeve	position degree : 114.0
travel mm : 1.01 Tolerance mm : +- 0.20	tolerance degree : +- 4.0
Total de dans	RATED SPEED
Rated speed rpm : 1352	+
guide sleeve travel mm : 6.10	+ rack travel mm : 10.90 + Rated speed rpm : 1345
Tolerance mm : + 0.15	+ Tolerance 1/min : +- 5
	+
Rated speed rpm : 1140 guide sleeve	+ rack travel mm : 4.00 + Rated speed rpm : 1500
travel mm : 4.84	Tolerance 1/min : + 15
Tolerance mm : + 0.25	+
Saturd amond many 1 7/0	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
Rated speed rpm : 740 guide sleeve	+ Tolerance mm : + 0.50 + Rated speed rpm : 1600
travel mm : 3.23	1
Tolerance mm : + 0.25	†
Rated speed rpm : 1800	LOW IDLE
guide sleeve	+
travel mm : 12.00 Tolerance mm : + 0.25	t control lever
Toter arice min	position degree : 73.0
Rated speed rpm : 1910	tolerance degree : + 4.0
guide sleeve travel mm : 13.50	† Testing:
travel mm : 13.50 Tolerance mm : +- 0.50	T resume.
The second secon	Rated speed rpm : 300
CHIDE OF FEVE POOTTON	- + rack travel mm : 4.00
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
	1

Rated speed rpm	: 200	+ Del. quantity
CDT	. > / 50	+ cm3/1000 strokes : 96.0
CRT mm min.	: > 4.50	+ Tolerance + cm3/1000 strokes : +- 1.5
		Check tolerance
TORQUE CONTROL		+ cm3/1000s. : +- 4.0
		Spreed
Rated speed rpm	: 1300	+ Tolerance
rack travel mm	: 11.90	+ cm3/1000 strokes : 5.0
Tolerance mm	: +- 0.05	+ Check tolerance
.	750	+ cm3/1000s. : 7.0
Rated speed rpm rack travel mm		Anonorid phoceums
Tolerance mm		+ Aneroid pressure + hPa : -
TOCCT CITICE THAT		Rated speed rpm : 500
ANEROID/ALTITUDE		+ cm3/1000 strokes : 61.0
COMPENSATOR TEST		† Tolerance
		+ cm3/1000 strokes : + 1.0
		+ Check tolerance
SETTING		+ cm3/1000s. : $+$ 3.0
Rated speed rpm	: 500	İ
Pressure hPa	: 1000	BREAKAWAY
rack travel mm		
Tolerance mm		+
		Rack travel in mm: 10.90
MEASUREMENT		+ Rated speed rpm : 1345
		+ Tolerance 1/min : +- 5
Pressure hPa	500	†
Rated speed rpm Tolerance mm		<u> </u>
TOTEL GLICE (INI)	. 1- 0.10	T STARTING FUEL DELIVERY
Rated speed rpm	: 500	- OTHER THE PERSON
		A Rated speed rpm : 100
		+ Del. quantity
Pressure hPa	: 350	
rack travel mm	: 1.30	+ cm3/1000 strokes : 125.0
		cm3/1000 strokes : 125.0 Tolerance
rack travel mm Tolerance mm	: 1.30 : + 0.10	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0
rack travel mm Tolerance mm Pressure hPa	: 1.30 : + 0.10 : 250	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm	: 1.30 : + 0.10 : 250 : 0.65	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0
rack travel mm Tolerance mm Pressure hPa	: 1.30 : + 0.10 : 250	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1.30 : + 0.10 : 250 : 0.65	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm	: 1.30 : + 0.10 : 250 : 0.65	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : +- 5.0 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220 : > 80	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check speed 1/min	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220 : > 80 : < 240	cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220 : > 80 : < 240	Cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check speed 1/min FUEL DELIVERY CHA	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220 : > 80 : < 240	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check speed 1/min FUEL DELIVERY CHA Aneroid pressure	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220 : > 80 : < 240	Tolerance cm3/1000 strokes : 125.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance
rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm Rated speed rpm Check speed 1/min Check speed 1/min FUEL DELIVERY CHA	: 1.30 : + 0.10 : 250 : 0.65 : + 0.10 : > 100 : < 220 : > 80 : < 240	Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 rack travel mm : 4.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed

cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 30.05.95 : ISO 4113 Test oil

Combination No. : 0 402 646 602

Injection pump

Pump designation : PE6P12DA72DRS7264

EP type number : G 412 626 874

Governor

Governer design. : RQ750PA758-14 Governer no. : 0 421 801 659

Cust. part No. : 1337552

Customer-spec. information Customer : SCANIA

Motor : D 11

TEST BENCH REQUIREMENTS

: 4.2 Inlet line

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : +-5.05 : +- 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 14.15

Tolerance nm: $\leftarrow 0.05$

Del. quantity

cm3/1000 strokes : 276.0

Tolerance cm3/1000 strokes : +- 1.0	control lever position degree : 90.0
Check tolerance cm3/1000S. : +- 4.0	tolerance degree : +- 4.0
Spreed Tolerance	- ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : 8.0	Rated speed rpm : 750 rack travel mm : 13.10
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 794 Tolerance 1/min : + 4 rack travel mm : 4.00
Rack travel in mm: 5.50	+
Tolerance mm : + 0.10 Del. quantity	rack travel mm : 0.50 Tolerance mm : + 0.50
cm3/1000 strokes : 30.0 Tolerance	Rated speed rpm : 850
cm3/1000 strokes : +- 4.0	Rated speed rpm : 751
Check tolerance	rack travel mm : 13.10
cm3/1000s. : +- 6.0	Rated speed rpm : 795
Spreed Tolerance	+ Tolerance 1/min : +- 4
cm3/1000 strokes : 5.0	rack travel mm : 4.00
Check tolerance	1 401/ 6/4/66 1188
cm3/1000s. : 9.0	rack travel mm : 0.50
	+ Tolerance mm : + 0.50
	+ Rated speed rpm : 850
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ Rated speed rpm : 752
	+ rack travel mm : 13.10
	Rated speed rpm : 796
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 796 + Tolerance 1/min : +- 4
TOLE COND DELIVERY AT TOLE COND STOR	+ rack travel mm : 4.00
Rated speed rpm : 700	
RATEO SDEED FOR : (UU	
The state of the s	+
Aneroid pressure hPa : -	rack travel mm : 0.50 Tolerance mm : + 0.50
Aneroid pressure hPa : -	rack travel mm : 0.50 Tolerance mm : + 0.50
Aneroid pressure	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 754
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Rated speed rpm : 850 Rated speed rpm : 754 rack travel mm : 13.10
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 754 rack travel mm : 13.10 Rated speed rpm : 798
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 29.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 754 rack travel mm : 13.10 Rated speed rpm : 754 rack travel mm : 13.10 Rated speed rpm : 798 Tolerance 1/min : + 4
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 754 rack travel mm : 13.10 Rated speed rpm : 798
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 276.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 29.0	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 13.10 Rated speed rpm : 797 Tolerance 1/min : + 4 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 850 Rated speed rpm : 754 rack travel mm : 13.10 Rated speed rpm : 754 rack travel mm : 13.10 Rated speed rpm : 798 Tolerance 1/min : + 4

Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 13.10
Rated speed rpm	799
Tolerance 1/min	+ 4
rack travel mm	+ 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 14.15 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 14.15
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 11.00
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 210 rack travel mm : 11.90 Tolerance mm : + 0.20

Pressure hPa : 440 rack travel mm : 13.45 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 177.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.40
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 120.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 30,10.95 : ISO 4113

Test oil

Combination No. : 0 402 646 665

Injection pump

Pump designation: PE6P130A720RS7354

EP type number

: 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -3K

Governer no.

: 0 421 815 491

Cust. part No. :

Customer-spec. information

Customer

: IVECO-FRANCE

Motor

: 8210.42K.3000

TEST BENCH REQUIREMENTS

Inlet line

Test oil inlet

temp. °C

Tolerance °C 2.0

Overflow valve : 2 417 413 076

Inlet press. bar :

Tolerance bar

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 075

Outside diameter : 8.0

B10

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

5.05 Prestroke mm

Tolerance mm Check

: + 0.05

tolerance mm

: + - 0.10

Rack travel in mm : 12.00

: + 0.50Tolerance mm

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Check

: + 0.40tolerance "NW

Barrel no.

1

BASIC SETTING

Rated speed rpm 950

Rack travel in mm: 12.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

244.0

Tolerance

cm3/1000 strokes : + 1.0

	+
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1200 Rack travel in mm : 11.00
Check tolerance	+ Tolerance mm : + 2.70
cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 950
Rack travel in mm : 4.80 Tolerance mm : + 0.20 Del. quantity	Aneroid pressure hPa : 900 Del. quantity
cm3/1000 strokes : 22.0 Tolerance	cm3/1000 strokes : 244.0 Tolerance
cm3/1000 strokes : + 3.0 Check tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : +- 6.0 Spreed Tolerance	+ cm3/1000s. : + 4.0 + Spreed + Tolerance
cm3/1000 strokes : 8.0 Check tolerance	cm3/1000 strokes : 5.0 Check tolerance
cm3/1000s. : 12.0	cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 114.0 tolerance degree : +- 4.0
Rated speed rpm : 300 guide sleeve	RATED SPEED
travel mm : 1.64 Tolerance mm : + 0.20	+ rack travel mm : 11.00 + Rated speed rpm : 1015
Rated speed rpm : 1025 guide sleeve	Tolerance 1/min : +- 5
travel mm : 9.00 Tolerance mm : + 0.15	rack travel mm : 4.00 Rated speed rpm : 1015 Tolerance 1/min : + 15
Rated speed rpm : 764 guide sleeve travel mm : 6.22	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1250
Rated speed rpm : 500 guide sleeve	
travel mm : 3.78 Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1330 guide sleeve	control lever position degree : 71.0
travel mm : 13.50 Tolerance mm : + 0.50	tolerance degree : +- 4.0 Testing:
	Testing.

Rated speed rpm	: 300	+
rack travel mm Tolerance mm	: 4.80	+ Rated speed rpm :> 180
Tolerance mm	: + 0.10	+ Rated speed rpm : < 220
Detect areast and	: 200	†
Rated speed rpm	: 200	+ Check + speed 1/min :> 200
CRT mm min.	: > 6.30	+ speed 1/min :> 200 + Check
Citi dini deres.	. > 0.50	speed 1/min : < 240
Rated speed rom	: 355	Specu (7 m/r)

TORGUE CONTROL		+
		+ Aneroid pressure
Rated speed rpm	: 950	+ hPa : 900
rack travel mm	12.05	Rated speed rpm : 550
Tolerance mm	: +- 0.05	Del. quantity
Dated speed non	200	cm3/1000 strokes : 264.0 Tolerance
Rated speed rpm	: 11.85	+ cm3/1000 strokes : +- 3.0
rack travel mm Tolerance mm	: ← 0.10	Check tolerance
TOTAL MINI		+ cm3/1000s. : + 6.0
Rated speed rpm	: 550	
rack travel mm	: 11.50	Aneroid pressure
Tolerance mm	: +- 0.10	+ hPa : -
		+ Rated speed rpm : 550
Rated speed rpm	: 300 : 10.90	† Del. quantity
rack travel mm	: 10.90	+ cm3/1000 strokes : 174.0
Tolerance mm	: ← 0.30	+ Tolerance
		+ cm3/1000 strokes : + 1.0
ANCHOTO / AL TITUDE		Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		+ cm3/1000s. : +- 4.0
COMPENSATOR TEST		I
		BREAKAWAY
SETTING		
		+
Rated speed rpm	: 950	Rack travel in mm: 11.00
Pressure hPa		+ Rated speed rpm : 1015
rack travel mm		† Tolerance 1/min : +- 5
Tolerance mm	: +- 0.05	†
		†
MEASUREMENT		CTARTING FUEL OF THEON
Pressure hPa	•	STARTING FUEL DELIVERY
Rated speed rpm	950	Rated speed rpm : 100
rack travel mm	8.50	rack travel mm : 20.25
Tolerance mm	: +- 0.20	+ Tolerance mm : +- 0.75
, o do , di , jo di , ini		Del. quantity
Rated speed rpm	: 950	+ cm3/1000 strokes : 150.0
•		† Tolerance
Pressure hPa	: 290	+ cm3/1000 strokes : +- 15.0
rack travel mm	: 9.35	+ Check tolerance
Tolerance mm	: ← 0.20	+ cm3/1000s. : +- 19.0
	- 500	†
Pressure hPa	: 500	†
rack travel mm	: 11.10 : +- 0.05	İ
Tolerance mm	. 0.05	LOW IDLE
		T COM INCE
START CUT-OUT		Rated speed rpm : 300
- / mil 001 001		1 wasan alegan i biii i aaa

rack travel mm Tolerance mm	: +-	4.80 0.20
Del. quantity cm3/1000 strokes Tolerance	:	22.0
cm3/1000 strokes Check tolerance	; +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	;	8.0
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W480/...

Edition : 06.12.95 Test oil : ISO 4113

Combination No. : 0 402 648 602

Injection pump

Pump designation : PE8P110A320RS7398 EP type number : 0 412 618 800

Governor

Governer design. : RQV300...900PA1252K

Governer no. : 0 421 815 484

Cust. part No. :

Customer-spec. information
Customer : TATRA
Motor : T3B-928.60
Power KW : 255.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 13.00 Tolerance mm : + 1.00

Firing order : 1-8-5-4-7

: - 2- 3- 6

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.30

Check

tolerance "NW : \leftarrow 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 14.00

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 191.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : + 4.0

	+	
Spreed		Rack travel in mm : 13.00
Tolerance	+	Tolerance mm : + 1.50
cm3/1000 strokes :	5.0	
		
Check tolerance	†	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. :	9.0	200
Datasi annud annu	350	Rated speed rpm : 900
Rated speed rpm :	250	Aneroid pressure hPa : 1500
Rack travel in mm :	5.20	Del. quantity
Tolerance mm :	+ 0.30 I	cm3/1000 strokes : 191.0
Del. quantity	4	Tolerance
cm3/1000 strokes :	17.0	cm3/1000 strokes : + 1.0
Tolerance	1	Check tolerance
	+- 3.0 +	cm3/1000s. : + 4.0
Check tolerance	+	Spreed
cm3/1000s. :	+- 6.0 +	Tolerance
Spreed	+	cm3/1000 strokes : 5.0
Tolerance	• • • • • • • • • • • • • • • • • • • •	Check tolerance
cm3/1000 strokes :	8.0	cm3/1000s. : 9.0
Check tolerance cm3/1000s.	12.0	
cm3/1000s. :	I	
	\mathbf{I}	CONTROL LEVER
(B) SETTING OF INJECT	TION PUMP	
WITH GOVERNOR	1	control lever
	+	position degree : 65.0
		tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL	+	
	+	control lever
Rated speed rpm :	300 +	position degree : 119.0
guide sleeve	1 47	tolerance degree : +- 4.0
travel mm : Tolerance mm :	1.63 + 0.20 +	RATED SPEED
toterance name.	I	RATED SPEED
Rated speed rpm :	958	rack travel mm : 13.00
guide sleeve	1	Rated speed rpm : 945
travel mm :	8.79	Tolerance 1/min : + 5
Tolerance mm :	+ 0.15	
	+	rack travel mm : 4.00
Rated speed rpm :	777 +	Rated speed rpm : 1065
guide sleeve	†	Tolerance 1/min : + 15
travel mm :	6.70	made through the CO
Tolerance mm :	+ 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm :	520	Tolerance mm : +- 0.50 Rated speed rpm : 1150
guide sleeve	I	Rated Speed (pill . 1130
travel mm :	3.73	
	+ 0.25	
	1	LOW IDLE
Rated speed rpm :	1260	
guide sleeve	+	
travel mm :	13.50	control lever
Tolerance mm :	← 0.50 +	position degree : 70.0
	†	tolerance degree : +- 4.0
CUTNE CLEENE POSTETO	NI TOTAL TOT	control loven
GUIDE SLEEVE POSITION	Ť	control lever position degree : 16.0
Rated speed rpm :	1115	tolerance degree : +- 4.0
varen sheen this	T	cotoraine acgree i 1 410

Tankina	
Testing:	
Rated speed rpm	: 250
rack travel mm Tolerance mm	: 5.20 : ← 0.10
Rated speed rpm	: 150
CRT mm min.	: > 6.00
Rated speed rpm	: 35 0
TORQUE CONTROL	
Rated speed rpm	: 900
rack travel mm	: 14.00
Tolerance mm	: +- 0.05
Rated speed rpm	: 600
rack travel mm Tolerance mm	: 600 : 13.10 : + 0.10
	• • • • • • • • • • • • • • • • • • • •
Rated speed rpm	: 300 : 12.60
rack travel mm Tolerance mm	: 12.60 : +- 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	
Marca obcea i biii	: 900
Pressure hPa	: 1500
Pressure hPa rack travel mm	: 1500 : 14.00
Pressure hPa rack travel mm Tolerance mm	: 1500
Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 1500 : 14.00
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa	: 1500 : 14.00 : +- 0.05
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 1500 : 14.00 : + 0.05
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 1500 : 14.00 : +- 0.05
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	1500 : 14.00 : +- 0.05 : - : 900 : 9.05
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa	1500 14.00 14.00 14.00 19.05 19.05 19.05 19.05 19.00 19.00 19.00 19.00 19.00 19.00
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	1500 14.00 14.00 14.00 14.00 19.05 19.05 19.05 19.05 19.05 19.05 19.05 19.05 19.05 19.05 19.05 19.05 19.05
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	1500 14.00 14.00 14.00 19.05 19.05 19.05 19.05 19.00 19.00 19.00 19.00 19.00 19.00
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	1500 14.00 14.00 14.00 14.00 19.05 19.05 19.05 19.05 19.05 19.05 10.15 10.15 10.15 10.15 10.15
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	1500 14.00 14.00 14.00 14.00 19.05 19.05 19.05 19.05 19.05 19.05 10.15 10.15 10.15

Rated speed rpm Rated speed rpm	: > 100 : < 170
Check speed 1/min Check	: > 80
speed 1/min	: < 190
FUEL DELIVERY CHA	RACTERÍSTICS
Aneroid pressure hPa	: 1500
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes Tolerance	: 198.0
cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: 5.0
Aneroid pressure	
hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	
Tolerance	
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 13.00 : 945 : + 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 20.50 : +- 0.50
Del. quantity cm3/1000 strokes	: 255.0
Tolerance cm3/1000 strokes	: +- 20.0
Check tolerance cm3/1000s.	: +- 24.0
LOW IDLE	
Rated speed rpm rack travel mm	: 250 : 5.20

Tolerance mm	: +-	0.30
Del. quantity		47.0
cm3/1000 strokes	;	17.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance	•	
cm3/1000s.	•	12.0
(1000)	•	12.0

Note remarks

Refer to Service Info for test and

adjustment instructions. See microcard(s) W400/...

Edition : 01.12.95 : ISO 4113 Test oil

Combination No. : 0 402 848 300

Injection pump

Pump designation : PE8P120A520LS8518

EP type number : 0 412 828 201

Governor

Governer design. : RQV300...1150PA1039

: -3K

Governer no. : 0 421 815 980

Cust. part No. : 51.11103-7492

Customer-spec. information

Customer : MAN

: D 2848 LE 403 Motor

: 588.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C 2.0

Overflow valve : 1 417 413 078

Inlet press. bar :

: + 0.1Tolerance bar

Overflow quantity

: 170 min. L/h

: +- 15.0 Tolerance 1/h

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar

Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter: 8.0

x inside diameter : 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +-1.0

Prestroke mm : 5.65

Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 13.00

Tolerance m_0 : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

: + 0.30Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 13.70

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 337.0

		+ Tolerance mm : + 0.50
Tolerance cm3/1000 strokes	: +- 1.0	+
Check tolerance		GUIDE SLEEVE POSITION
cm3/1000s.	: +- 4.0	Rated speed rpm : 1327
Spreed Tolerance cm3/1000 strokes	: 8.0	Rack travel in mm: 12.70 Tolerance mm: + 1.30
Check tolerance cm3/1000s.	: 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm : 1150 Aneroid pressure
Rack travel in mm	n: 5.00	+ hPa : 2000 + Del. quantity
Tolerance mm Del. quantity	: + 0.20	cm3/1000 strokes : 337.0 Tolerance
cm3/1000 strokes Tolerance	: 49.0	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes Check tolerance		+ cm3/1000s. : + 4.0 + Spreed
cm3/1000s. Spreed	: +- 8.0	Tolerance cm3/1000 strokes : 8.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0	Check tolerance cm3/1000s. : 12.0
cm3/1000s.	: 12.0	
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	control lever position degree : 118.0
		+ tolerance degree : + 4.0
GUIDE SLEEVE TRAV	EL	+
Rated speed rpm	: 300	RATED SPEED
		RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1195
Rated speed rpm guide sleeve	: 300	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.61 : + 0.20 : 1206	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325
Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.61 : + 0.20	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325 Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.61 : + 0.20 : 1206 : 9.84 : + 0.15 : 797	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.61 : + 0.20 : 1206 : 9.84 : + 0.15	rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm Rated speed rpm	: 300 : 1.61 : + 0.20 : 1206 : 9.84 : + 0.15 : 797 : 6.36	rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 300 : 1.61 : + 0.20 : 1206 : 9.84 : + 0.15 : 797 : 6.36 : + 0.25	rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1400 LOW ÎDLE control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.61 : + 0.20 : 1206 : 9.84 : + 0.15 : 797 : 6.36 : + 0.25 : 460 : 3.78	rack travel mm : 12.70 Rated speed rpm : 1195 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1325 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1400 LOW IDLE

Data dana dana	700	+		
Rated speed rpm rack travel mm Tolerance mm	: 5.00	‡	START CUT-OUT	4710
Rated speed rpm	: 200	‡	Rated speed rpm Rated speed rpm	
CRT mm min.	: > 6.90	‡	Check speed 1/min	: > 150
Rated speed rpm	: 340	‡	Check speed 1/min	
TORQUE CONTROL		+		
Rated speed rpm	: 1150	<u> </u>	FUEL DELIVERY CHA	ARACTERISTICS
rack travel mm		1	Aneroid pressure	
rack travel mm Tolerance mm	: +- 0.05	1	hPa	: 2000
		+	Rated speed rpm	: 1000
Rated speed rpm		+	Del. quantity	
rack travel mm	: 13.65	+	cm3/1000 strokes	: 344.0
Tolerance mm	: + 0.10	+	Tolerance	
Data dana adam	. 050	T	cm3/1000 strokes	: +- 4.0
Rated speed rpm rack travel mm	: 850 : 12.60	Ī	Check tolerance cm3/1000s.	: +- 8.0
Tolerance mm		I	CIID7 (0003.	: +- 0.0
local di ica iiin	. , 0.70		Aneroid pressure	
Rated speed rpm	: 650	1	hPa	: 2000
rack travel mm		1	Rated speed rpm	
Tolerance mm		1	Del. quantity	
		+	cm3/1000 strokes	: 321.0
			Tolerance	
ANEROID/ALTITUDE		+	cm3/1000 strokes	: +- 4.0
COMPENSATOR TEST		+	Check tolerance	
		+	cm3/1000s.	: + 8.0
CETTALO		†	Americal di management	
SETTING		†	Aneroid pressure hPa	: 2000
Rated speed rpm	: 1150	Ī	Rated speed rpm	
Pressure hPa		I	Del. quantity	. 030
rack travel mm		I	cm3/1000 strokes	: 299.0
Tolerance mm	· + 0.05	1	Tolerance	
,	•	1	cm3/1000 strokes	: +- 4.0
MEASUREMENT		+	Check tolerance	
		+	cm3/1000s.	: +- 8.0
Pressure hPa	• -	+		
Rated speed rpm		+	Ameroid pressure	
rack travel mm	: 7.70	†	hPa	500
Tolerance mm	: +- 0.15	†	Rated speed rpm	: 500
Dahad mand man	. 4450	Ť	Del. quantity	. 195 0
Rated speed rpm	: 1150	T	cm3/1000 strokes Tolerance	: 185.0
Pressure hPa	: 220	I	cm3/1000 strokes	; - 1.0
rack travel mm	: 8.05	I	Check tolerance	
Tolerance mm	: + 0.05	I	cm3/1000s.	: 4.0
TO COT GITTO THE		1		7.0
Pressure hPa	: 1050	1		
rack travel mm	: 11.90	1	BREAKAWAY	
Tolerance mm	: +- 0.15	+		
		1		

Rack travel in mm :

12.70

Rated speed rpm : 1195 Tolerance 1/min : +-STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : + - 0.50Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s.: + 19.0LOW IDLE 300 Rated speed rpm 5.00 rack travel mm Tolerance mm : + 0.20Del. quantity cm3/1000 strokes : 49.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.12.95 Test oil : ISO 4113

Combination No. : 0 403 234 005

Injection pump

Pump designation : PES4MW100/320/3RS152

: 0

EP type number : 0 413 204 015

Governor

Governer design. : RQV300...1100MW141K

Governer no. : 0 420 083 983

Cust. part No. :

Customer-spec. information

Customer : PERKINS

Motor : Phaser 110 TI

Power KW : 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : \leftarrow 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.80 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 13.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW before FB : 48.00

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 134.0

Tolerance

cm3/1000 strokes : +- 1.0

	1
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1475
Spreed	Rack travel in mm: 10.00
Tolerance	+ Tolerance mm : + 2.70
cm3/1000 strokes : 4.0	+
Cheek tolongoo	FULL LOAD DELTUEDY AT FULL LOAD STOD
Check tolerance cm3/1000s. : 7.5	full LOAD DELIVERY AT FULL LOAD STOP
. (.)	Rated speed rpm : 1300
Rated speed rpm : 325	+ Aneroid pressure
	+ hPa : 1000
Rack travel in mm: 5.50	+ Del. quantity
Tolerance mm : + 0.20	+ cm3/1000 strokes : 134.0 + Tolerance
Del. quantity cm3/1000 strokes : 18.0	+ cm3/1000 strokes : + 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : + 2.0	+ cm3/1000s. : +- 4.0
Check tolerance	+ Spreed
cm3/1000s. : +- 4.5	+ Tolerance
Spreed	+ cm3/1000 strokes : 4.0
Tolerance cm3/1000 strokes : 3.5	+ Check tolerance + cm3/1000s. : 7.5
Check tolerance	1 (115) 10003.
cm3/1000s. : 5.5	+
	+ CONTROL LEVER
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	+ control lever + position degree : 120.0
	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	1
	+ RATED SPEED
Rated speed rpm : 325	†
guide sleeve travel mm : 1.61	+ rack travel mm : 13.10 + Rated speed rpm : 1345
Tolerance mm : + 0.20	Tolerance 1/min : + 5
TO COLL COLL COLL COLL COLL COLL COLL CO	+
Rated speed rpm : 1355	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1480
travel mm : 10.23	† Tolerance 1/min : +- 15
Tolerance mm : + 0.15	+ rack travel mm : 0.50
Rated speed rpm : 881	+ Tolerance mm : +- 0.50
guide steeve	+ Rated speed rpm : 1600
travel mm : 6.46	+
Tolerance mm : + 0.25	†
Rated speed rpm : 500	LOW TOLE
Rated speed rpm : 500 guide sleeve	+ LOW IDLE
travel mm : 3.91	1
Tolerance mm : + 0.25	- control lever
	position degree : 74.0
Rated speed rpm : 1630	tolerance degree : + 4.0
guide sleeve	Tooting
travel mm : 13.50 Tolerance mm : + 0.50	+ Testing:
TOTAL GUIDE HARE . THE U.DU	Rated speed rpm : 325
	rack travel mm : 5.50
GUIDE SLEEVE POSITION	+ Tolerance mm : + 0.10

Rated speed rpm	. 200	†
		FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 7.50	+ Aneroid pressure
TORQUE CONTROL	·	hPa : 1000 Rated speed rpm : 800
Rated speed rpm		Del. quantity cm3/1000 strokes : 131.0 Tolerance
rack travel mm Tolerance mm		- cm3/1000 strokes : + 2.0 - Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 800 : 12.90	cm3/1000s. : + 5.0 Spreed
		Tolerance cm3/1000 strokes : 6.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 11.10	cm3/1000s. : 9.0
		Aneroid pressure hPa : 1000
ANEROID/ALTITUDE COMPENSATOR TEST		Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 110.0
SETTING		Tolerance cm3/1000 strokes : + 1.5
Rated speed rpm	: 1300	+ Check tolerance + cm3/1000S. : + 4.0
Pressure hPa rack travel mm Tolerance mm	: 14.05	Aneroid pressure hPa : -
MEASUREMENT		Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 69.0
Pressure hPa Rated speed rpm	: – : 1300	Tolerance + cm3/1000 strokes : + 1.0
rack travel mm Tolerance mm	: 8.80	Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm	: 1300	BREAKAWAY
Pressure hPa rack travel mm		+
Tolerance mm Pressure hPa		+ Rack travel in mm : 13.10 + Rated speed rpm : 1345 + Tolerance 1/min : +- 5
rack travel mm Tolerance mm	: 250 : 9.90 : +- 0.05	Toterance min . +- 5
START CUT-OUT		STARTING FUEL DELIVERY
Rated speed rpm Rated speed rpm		Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity
Check speed 1/min	: > 170	cm3/1000 strokes : 85.0 Tolerance
Check speed 1/min	: < 250	cm3/1000 strokes : +- 7.0 Check tolerance cm3/1000s. : +- 10.0

LOW IDLE

Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: +-	325 5.50 0.20 18.0 2.0 4.5	
cm3/1000 strokes	:	3.5	
Check tolerance cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.12.95 Test oil : ISO 4113

Combination No. : 0 403 236 005

Injection pump

Pump designation : PES6MW100/320/3RS151

: 8-1

EP type number : 0 413 206 018

Governor

Governer design. : RQV325...1300MW133

: -1K

Governer no. : 0 420 083 984

Cust. part No. :

Customer-spec. information Customer : PERKINS Motor : 180 TI Power KW : 134.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 5.00
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 13.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance "NW : + 0.75

Start of delivery blocking

*NW before FB : 46.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 14.65
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 141.0

Check tolerance cm3/1000s. : + 4.0 Rated speed rpm : 1475 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 Rated speed rpm : 325 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 5.80 Rack travel in mm : 5.80 Pal. quantity Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 23.0 Check tolerance cm3/1000 strokes : + 1.0	ГОР
cm3/1000s. : + 4.0 Rated speed rpm : 1475 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 Rated speed rpm : 10.00 FULL LOAD DELIVERY AT FULL LOAD S Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 900 Rack travel in mm : 5.80 Tolerance mm : + 0.20 Del. quantity Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance Tolerance	гор
Tolerance cm3/1000 strokes: 4.0 Check tolerance cm3/1000s.: 7.5 Rated speed rpm: 325 Rack travel in mm: 5.80 Tolerance mm: 5.80 Tolerance mm: + 0.20 Del. quantity Tolerance mm: + 0.20 Del. quantity Tolerance	ГОР
cm3/1000s. : 7.5 Rated speed rpm : 1300 Rated speed rpm : 1300 Aneroid pressure hPa : 900 Rack travel in mm : 5.80 Del. quantity Tolerance mm : + 0.20 cm3/1000 strokes : 141.0 Del. quantity Tolerance	ТОР
Rated speed rpm : 325	
Rack travel in mm: 5.80 + Del. quantity Tolerance mm: + 0.20 + cm3/1000 strokes: 141.0 Del. quantity + Tolerance	
Tolerance mm : + 0.20 + cm3/1000 strokes : 141.0 Del. quantity + Tolerance	
in the second se	
Tolerance	
Check tolerance + Spreed + Tolerance + cm3/1000s. : + 4.5 + cm3/1000 strokes : 4.0	
Tolerance + Check tolerance	
cm3/1000 strokes : 3.5 + cm3/1000s. : 7.5 Check tolerance	
cm3/1000s. : 5.5	
CONTROL LEVER	
(B) SETTING OF INJECTION PUMP +	
WITH GOVERNOR + control lever	
+ position degree : 120.0 + tolerance degree : + 4.0	
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 325 + RATED SPEED	
guide sleeve + rack travel mm : 13.60	
travel mm : 1.61 + Rated speed rpm : 1345	
Tolerance mm : + 0.20 † Tolerance 1/min : + 5	
Rated speed rpm : 1355 F rack travel mm : 4.00	
guide sleeve + Rated speed rpm : 1480	
travel mm : 10.23 + Tolerance 1/min : + 15 Tolerance mm : + 0.15	
Rated speed rpm : 881 + rack travel mm : 0.50 Rated speed rpm : 40.50 Rated speed rpm : 1600	
guide sleeve + Rated speed rpm : 1600 travel mm : 6.46	
Tolerance mm : + 0.25	
Rated speed rpm : 500 + LOW IDLE guide sleeve +	
travel mm : 3.91	
Tolerance mm : + 0.25 + control lever + position degree : 75.0	
Rated speed rpm : 1630 + tolerance degree : + 4.0 guide sleeve	
travel mm : 13.50 + Testing: Tolerance mm : + 0.50 +	

Rated speed rpm rack travel mm	325	1		
Tolerance mm	: + 0.10	I	START CUT-OUT	
Rated speed rpm	: 200	1	Rated speed rpm	
CRT mm mir.	: > 8.00	Ŧ	Rated speed rpm	; \ 240
		†	Check	: > 170
TORQUE CONTROL		T	speed 1/min Check	: > 170
TORGOE CONTROL		I	speed 1/min	; < 270
Rated speed rpm	: 1300	I	opeca mini	
rack travel mm	: 14.65	1		
Tolerance mm	: ← 0.05	1	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm	: 800	I	Aneroid pressure	
rack travel mm		1	hPa	: 900
Tolerance mm		1	Rated speed rpm	
		1	Del. quantity	
Rated speed rpm		+	cm3/1000 strokes	: 141.0
rack travel mm		+	Tolèrance	
Toterance mm	: +- 0.10	+	cm3/1000 strokes	: +- 2.0
		+	Check tolerance	
Rated speed rpm	: 1000	+	cm3/1000s.	: ← 5.0
rack travel mm		+	Spreed	
Tolerance mm	: ← 0.15	†	Tolerance	4.0
Dadasi amasal mas	. 700	†	cm3/1000 strokes	: 6.0
Rated speed rpm	: 700	†	Check tolerance	: 9.0
rack travel mm		Ī	cm3/1000s.	; 9.0
Tolerance mm	, +- 0,15	I	Aneroid pressure	
		I	hPa	: 900
ANEROID/ALTITUDE		I	Rated speed rpm	
COMPENSATOR TEST		1	Del. quantity	. 365
		1	cm3/1000 strokes	: 116.5
		<u> </u>	Tolerance	
SETTING		+	cm3/1000 strokes	: + 2.0
		+	Check tolerance	
Rated speed rpm	: 1300	+	cm3/1000s.	: +- 5.0
Pressure hPa		+		
rack travel mm		+	Aneroid pressure	
Tolerance mm	: + 0.05	†	hPa	500
MEAGUDEMENT		Ť	Rated speed rpm	: 500
MEASUREMENT		I	Del. quantity cm3/1000 strokes	• 60.0
Pressure hPa	• ~	I	Tolerance	. 07.0
Rated speed rpm	1300	1	cm3/1000 strokes	: +- 1.0
rack travel mm	9.20	1	Check tolerance	• • • • • • • • • • • • • • • • • • • •
Tolerance mm		+	cm3/1000s.	: ← 3.0
		+		
Rated speed rpm	: 1300	1	BREAKAWAY	
Pressure hPa	: 400	1		
rack travel mm		+		
Tolerance mm		+	Rack travel in mm	
		. +	Rated speed rpm	: 1345
Pressure hPa		+	Tolerance 1/min	: +- 5
rack travel mm		+		
Tolerance mm	: +- 0.05	+		

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 85.0

Tolerance

cm3/1000 strokes : + 7.0

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 325 rack travel mm 5.80 Tolerance mm 0.20 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance 5.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.12.95 Test oil : ISO 4113

Combination No. : 0 403 276 014

Injection pump

Pump designation : PES6MW100/720RS1527 EP type number : 0 413 206 026

Governor

Governer design. : RSV350...1300MWDA391 Governer no. : 0 420 085 277

Cust. part No. : 0260749102

Customer—spec. information
Customer : MB-NFZ
Motor : OM366LA
Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzie holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240 : -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.40 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 133.0

Tolerance cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 4.0

Spreed

Tolerance cm3/1000 strokes : 4.0

		+		
Check tolerance cm3/1000s.	: 7.5	+	control lever position degree tolerance degree	: 106.0 : + 4.0
Rated speed rpm	: 350	+	RATED SPEED	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: + 0.30	+	rack travel mm Tolerance mm Rated speed rpm	: 1.00 : ← 0.70 : 1600
Tolerance cm3/1000 strokes Check tolerance	: +- 2.0		rack travel mm Rated speed rpm	: 4.00 : 1465
cm3/1000s. Spreed	: +- 4.5		rack travel mm	: 13.40
Tolerance cm3/1000 strokes Check tolerance	: 3.5		Rated speed rpm Tolerance 1/min	: 1345 : + 5
cm3/1000s.	: 5.5	Ī	ASSEMBLY GOVERNOR	SETTING
(B) SETTING OF INJ	ECTION PUMP		Rated speed rpm rack travel mm	: 1340 : 13.40
WITH GOVERNOR		+ .	Rated speed rpm Tolerance 1/min rack travel mm	: 1444 : +- 4 : 4.00
GUIDE SLEEVE POSIT	TION	+		450.4
Rated speed rpm	: 800		Rated speed rpm rack travel mm	: 1341 : 13.40
Rack travel in mm Tolerance mm	: 0.65 : + 0.35	+ .	Rated speed rpm Tolerance 1/min rack travel mm	: 1445 : + 4 : 4.00
governor spring pre-tension click setting x	: 4.50		Rated speed rpm rack travel mm	: 1342 : 13.40
FULL LOAD DELIVERY	AT FULL LOAD STOP	+ 1	Rated speed rpm Tolerance 1/min rack travel mm	: 1446 : + 4 : 4.00
Rated speed rpm Aneroid pressure hPa	: 1300 : 1200		Rated speed rpm rack travel mm	: 1343 : 13.40
Del. quantity cm3/1000 strokes	: 133.0	+	Rated speed rpm	: 1447
Tolerance cm3/1000 strokes	: + 1.0	+ 1	Tolerance 1/min rack travel mm	: +- 4 : 4.00
Check tolerance cm3/1000s. Spreed	: +- 4.0		Rated speed rpm rack travel mm	: 1344 : 13.40
Tolerance cm3/1000 strokes	: 4.0	+	Rated speed rpm	: 1448
Check tolerance cm3/1000s.	: 7.5	+ 1	Tolerance 1/min rack travel mm	: +- 4 : 4.00
			Rated speed rpm rack travel mm	: 1345 : 13.40
CONTROL LEVER			Rated speed rpm Tolerance 1/min	: 1449 : +- 4

rack travel mm	: 4.00
LOW IDLE	
Setting point w/	out bumper spring
Rated speed rpm rack travel mm	
Testing:	
rack travel mm Rated speed rpm Tolerance 1/min	
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 14.40 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.40 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 14.40 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 800 : 5.10 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 450 : 1.90 : + 0.10

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1200 : 750
Del. quantity cm3/1000 strokes Tolerance	: 132.0
cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000s. Spreed	: 5.0
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000s.	: 9.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 500 : 46.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 3.0
STARTING FUEL DEL	TVFRY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 160.0 : + 5.0 : + 8.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 160.0 : + 5.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm	: 100 : 160.0 : + 5.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 100 : 160.0 : + 5.0 : + 8.0 : + 8.0 : 350 : 3.80 : + 0.30 : 12.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 100 : 160.0 : + 5.0 : + 8.0 : + 8.0 : 350 : 3.80 : + 0.30 : 12.0 : + 2.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. LOW IDLE Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 100 : 160.0 : + 5.0 : + 8.0 : + 8.0 : 350 : 3.80 : + 0.30 : 12.0

Check	tolerance	
cm3/10	000s.	:

5.5

End of test specification sheet

CO5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.11.95 Test oil : ISO 4113

Combination No. : 0 403 436 114

Injection pump

Pump designation : PES6MW100/320/3RS119

: 4-1

EP type number : 0 413 406 221

Governor

Governer design. : RQV300...1300MW108K

Governer no. : 0 420 083 998

Cust. part No. :

Customer-spec. information

Customer : PERKINS Motor : 180 TI Power KW : 134.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

Check

Firing order

tolerance mm : + 0.10

Rack travel in mm: 13.00
Tolerance mm: + 1.00

rocer ance man

: 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW before FB : 46.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 14.15

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 136.5

Tolerance

cm3/1000 strokes : +- 1.0

AL L . 4 . 1		
Check tolerance cm3/1000s.	: ← 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance		Rated speed rpm : 1400
cm3/1000 strokes	: 4.0	Rack travel in mm : 10.00 Tolerance mm : +- 2.70
Check tolerance cm3/1000s.	: 7.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm : 1300
Rack travel in mm	i: 6.20	Aneroid pressure
	: + 0.20	
Tolerance mm	: +- 0.20	
Del. quantity	1/0	Del. quantity
cm3/1000 strokes	: 16.0	cm3/1000 strokes : 136.5
Tolerance	†	Tolerance
cm3/1000 strokes	: +- 2.0	cm3/1000 strokes : + 1.0
Check tolerance	†	Check tolerance
cm3/1000s.	: +- 4.5	cm3/1000s. : + 4.0
Spreed	+	Spreed
Tolerance	+	Tolerance
cm3/1000 strokes	: 3.5	cm3/1000 strokes : 4.0
Check tolerance	+	Check tolerance
cm3/1000s.	: 5.5	cm3/1000s. : 7.5
WITH GOVERNOR	‡	CONTROL LEVER
GUIDE SLEEVE TRAV	+	control lever position degree : 120.0 tolerance degree : +- 4.0
Rated speed rpm	+	position degree : 120.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve	: 300	position degree : 120.0
Rated speed rpm guide sleeve travel mm	: 300 : 1.70	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED
Rated speed rpm guide sleeve	: 300	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.70 : + 0.20 : 1355	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.70 : + 0.20 : 1355	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 300 : 1.70 : + 0.20 : 1355 : 10.13	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 3.44	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 3.44 : + 0.25	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 3.44	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 3.44 : + 0.25 : 1640	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 76.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 480 : 13.50	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 3.44 : + 0.25 : 1640	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 76.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 480 : 13.50	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 76.0
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.70 : + 0.20 : 1355 : 10.13 : + 0.15 : 892 : 6.43 : + 0.25 : 480 : 480 : 13.50	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.15 Rated speed rpm : 1345 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1485 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 76.0 tolerance degree : + 4.0

Rated speed rpm rack travel mm	: 300 : 6.20	t
Tolerance mm		START CUT-OUT
Rated speed rpm	: 200	Rated speed rpm : > 190 Rated speed rpm : < 240
CRT mm min.	; > 8.00	Rated speed rpm : < 240 Check
TORQUE CONTROL		speed 1/min : > 170 Check
	. 4700	speed 1/min : < 250
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 14.15	
		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm	: 800 : 13.15	+ Aneroid pressure + hPa : 900
Tolerance mm		Rated speed rpm : 800
Rated speed rpm	: 500	+ Del. quantity + cm3/1000 strokes : 130.5
rack travel mm Tolerance mm	: 11.60 : +- 0.10	+ Tolerance + cm3/1000 strokes : +- 2.0
		+ Check tolerance
Rated speed rpm rack travel mm	: 13.60	+ cm3/1000s. : + 5.0 + Spreed
Tolerance mm	: + 0.15	Tolerance cm3/1000 strokes : 6.0
Rated speed rpm rack travel mm	: 700 • 12.75	Check tolerance cm3/1000s. 9.0
Tolerance mm	: + 0.15	+
		Aneroid pressure hPa: 900
ANEROID/ALTITUDE COMPENSATOR TEST		+ Rated speed rpm : 500 + Del. quantity
CON ENONTON TEOP		+ cm3/1000 strokes : 111.0
SETTING		+ Tolerance - cm3/1000 strokes : +- 2.0
Rated speed rpm	: 1300	+ Check tolerance + cm3/1000s. : +- 5.0
Pressure hPa rack travel mm	: 900 : 14.15	Aneroid pressure
Tolerance mm	· +- 0.05	+ hPa : -
MEASUREMENT		+ Rated speed rpm : 500 + Del. quantity
Pressure hPa	: -	+ cm3/1000 strokes : 62.0 + Tolerance
Rated speed rpm rack travel mm		cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance mm	: + 0.10	cm3/1000s. : + 3.0
Rated speed rpm	: 1300	BREAKAWAY
Pressure hPa	: 220	T DICANAM!
rack travel mm Tolerance mm	: 11.20 : + 0.15	Rack travel in mm: 13.15
Pressure hPa	: 180	+ Rated speed rpm : 1345 + Tolerance 1/min : +- 5
rack travel mm Tolerance mm	: 10.45 : +- 0.05	‡
TO CET OFFICE THAT	0.07	1

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 85.0 Tolerance cm3/1000 strokes : + 7.0 Check tolerance cm3/1000s. : + 10.0

LOW IDLE

Rated speed rpm 300 rack travel mm 6.20 Tolerance mm 0.20 Del. quantity cm3/1000 strokes 16.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance 5.5 cm3/1000s. :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 30.11.95 Test oil : ISO 4113

Combination No. : 0 403 444 145

Injection pump

Pump designation : PES4MW100/320RS1199

EP type number : 0 413 404 112

Governor

Governer design. : RQV300...1100MW131K

Governer no. : 0 420 083 987

Cust. part No. :

Customer-spec. information Customer : PERKINS Motor : VME Power KW : 74.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 100

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 13.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW before FB : 48.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.95
Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : +- 1.0

	+
Check tolerance cm3/1000s. : +- 3.0	GUIDE SLEEVE POSITION
Spreed Tolerance	Rated speed rpm : 1220
cm3/1000 strokes : 3.5	Rack travel in mm : 10.00 Tolerance mm : + 2.70
Check tolerance cm3/1000s. : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 1100
Rack travel in mm : 6.20 Tolerance mm : + 0.20	
Del. quantity cm3/1000 strokes : 18.0	Del. quantity cm3/1000 strokes : 130.0
Tolerance : + 2.0	Tolerance cm3/1000 strokes : + 1.0
Check tolerance cm3/1000s. : + 4.5	Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 130.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Spreed Tolerance cm3/1000 strokes : 3.5	+ Spreed + Tolerance + cm3/1000 strokes : 3.5
Check tolerance cm3/1000s. : 5.5	Check tolerance cm3/1000s. : 6.0
	‡
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
CUIDE OF FOUE TRAINS	control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : 300	position degree : 122.0 tolerance degree : + 4.0
Rated speed rpm : 300 guide sleeve travel mm : 1.70	RATED SPEED
Tolerance mm : + 0.20	rack travel mm : 11.90 Rated speed rpm : 1145
Rated speed rpm : 1156 guide sleeve	Tolerance 1/min : + 5
travel mm : 10.48 Tolerance mm : + 0.15	rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : +- 15
Rated speed rpm : 738 guide sleeve	rack travel mm : 0.50
travel mm : 5.47 Tolerance mm : + 0.25	Tolerance mm : + 0.50 Rated speed rpm : 1300
Rated speed rpm : 410 guide sleeve	
travel mm : 3.05 Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1340 guide sleeve	control lever position degree : 76.0
travel mm : 13.50 Tolerance mm : + 0.50	tolerance degree : + 4.0
	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.20 : + 0.10	theck speed 1/min : < 250
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 7.50	Aneroid pressure hPa : 900 Rated speed rpm : 800
TORQUE CONTROL		Del. quantity cm3/1000 strokes : 128.0
Rated speed rpm rack travel mm	: 1100 : 12.95	Tolerance cm3/1000 strokes : +- 1.5
Tolerance mm	: + 0.05	Check tolerance cm3/1000s. : + 4.0
Rated speed rpm rack travel mm	: 800 : 12.50	Spreed Tolerance
rack travel mm Tolerance mm	: + 0.10	- cm3/1000 strokes : 5.0 - Check tolerance
Rated speed rpm rack travet mm		cm3/1000s. : 7.0
Tolerance mm		Aneroid pressure hPa : 900 Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes : 111.0 Tolerance
SETTING		cm3/1000 strokes : + 1.5 Check tolerance
Rated speed rpm	: 1100	cm3/1000s. : +- 4.0
Pressure hPa rack travel mm	: 900 : 12.95	+ Aneroid pressure + hPa : -
Tolerance mm	4.0	Rated speed rpm : 500 Del. quantity
MEASUREMENT		cm3/1000 strokes : 72.0 Tolerance
Pressure hPa Rated speed rpm	: 1100	+ cm3/1000 strokes : + 1.0 + Check tolerance
rack travel mm Tolerance mm		cm3/1000s. : ← 3.0
Rated speed rpm	: 1100	BREAKAWAY
Pressure hPa rack travel mm Tolerance mm	: 11.15	Rack travel in mm : 11.90 Rated speed rpm : 1145 Tolerance 1/min : + 5
Pressure hPa rack travel mm Tolerance mm		
		STARTING FUEL DELIVERY
START CUT-OUT		Rated speed rpm : 100 rack travel mm : 20.00
Rated speed rpm Rated speed rpm	: > 190 : < 230	Tolerance mm : ← 1.00 Del. quantity cm3/1000 strokes : 85.0
Check speed 1/min	: > 170	Tolerance + cm3/1000 strokes : + 7.0

Check tolerance		
cm3/1000s.	: +-	10.0

٠	A11	TDI	_
- 1	1 1144	1 321	~

Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 300 : 6.20 : + 0.20
cm3/1000 strokes	: 18.0
Tolerance cm3/1000 strokes	: + 2.0
Check tolerance cm3/1000s.	: +- 4.5
Spreed Tolerance	
cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.12.95 Test oil : ISO 4113

Combination No. : 0 403 446 333

Injection pump

Pump designation : PES6MW100/720RS1131

: -1

EP type number : 0 413 406 165

Governor

Governer design. : RQV300...1300MW151

Governer no. : 0 420 083 333

Cust. part No. : 0260747102

Customer-spec. information
Customer : MB-NFZ
Motor : OM 366 LA

Motor : OM 366 LA Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.15

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 99.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

		1	
Check tolerance	. 4.0	FILL LOAD DELYUE	OV AT FILL LOAD CTOD
cm3/1000s.	: 6.0	+ FULL LUAD DELIVER	RY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm Aneroid pressure	: 1300
Rack travel in m		+ hPa	: 1000
Tolerance mm	: + 0.20	+ Del. quantity	. 00.0
Del. quantity cm3/1000 strokes	: 11.0	+ cm3/1000 strokes + Tolerance	: 99.0
Tolerance		+ cm3/1000 strokes	: + 1.0
cm3/1000 strokes	: +- 2.0	- Check tolerance	
Check tolerance cm3/1000s.	: +- 4.5	+ cm3/1000s. - Spreed	: + 3.0
Spreed	· +- 4.5	Tolerance	
Tolerance		+ cm3/1000 strokes	: 3.5
cm3/1000 strokes	: 3.5	- Check tolerance	
Check tolerance cm3/1000s.	: 5.0	- cm3/1000s.	: 6.0
CHO/ (UUU3.	: 5.0	Į	
(B) SETTING OF IN	SIECTION DIMD	CONTROL LEVER	
WITH GOVERNOR	ADECTION FORM	- CONTROL LEVER	
	•	control lever	
CUIDE OF EDIE TOAL	19-1	position degree	
GUIDE SLEEVE TRAN	/EL	tolerance degree	: + 4.0
Rated speed rpm	: 300	RATED SPEED	
guide sleeve	. 1 77	†	. 12.10
travel mm Tolerance mm	: 1.37 : +- 0.20	+ rack travel mm + Rated speed rpm	: 12.10 : 1345
TOCCI GITCO TAIL	• • • • • • • • • • • • • • • • • • • •	+ Tolerance 1/min	: +- 5
Rated speed rpm	: 1355	+	
guide sleeve	. 0 45	rack travel mm	: 4.00
travel mm Tolerance mm	: 8.65 : +- 0.15	+ Rated speed rpm + Tolerance 1/min	: 1460 : +- 15
TOTEL GLICE IMI		+	• • • • • • • • • • • • • • • • • • • •
Rated speed rpm	: 885	+ rack travel mm	: 0.50
guide sleeve	5 01	+ Tolerance mm	: +- 0.50
travel mm Tolerance mm	: 5.01 : + 0.25	+ Rated speed rpm	: 1330
		+	
Rated speed rpm	: 490	LOU THE	
guide sleeve travel mm	: 2.86	+ LOW IDLE	
Tolerance mm	: + 0.25	+	
	4440	+ control lever	15.5
Rated speed rpm	: 1610	+ position degree	
guide sleeve travel mm	: 11.50	tolerance degree	, - 4.0
Tolerance mm		Testing:	
		+	700
CHINE OF EENE BOOT	TTON	Rated speed rpm	
GUIDE SLEEVE POSI	.I LUIV	rack travel mm Tolerance mm	: +- 0.10
Rated speed rpm	: 1440	1	
		Rated speed rpm	: 200
Rack travel in mm		CDT mm min	. > 770
Tolerance mm	: 2. /U	CRT mm min.	: > 7.70
		£.	

	+ Tolerance
TORQUE CONTROL	cm3/1000 strokes : +- 1.5 Check tolerance
Rated speed rpm : 1300	cm3/1000s. : +- 4.0 Spreed
rack travel mm : 13.15 Tolerance mm : + 0.05	+ Tolerance + cm3/1000 strokes : 5.0 + Check tolerance
Rated speed rpm : 600 rack travel mm : 13.15	cm3/1000s. : 7.0
Tolerance mm : + 0.10	Aneroid pressure hPa : -
ANEROID/ALTITUDE COMPENSATOR TEST	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 42.0
TO THE PROPERTY OF THE PROPERT	Tolerance cm3/1000 strokes : + 1.0
SETTING	Check tolerance cm3/1000S. : + 3.0
Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 13.15	BREAKAWAY
Tolerance mm : + 0.10	T UNCARAMAT
MEASUREMENT	Rack travel in mm: 12.10 Rated speed rpm: 1345
Pressure hPa : - Rated speed rpm : 500 rack travel mm : 10.55	Tolerance 1/min : + 5
Tolerance mm : + 0.10	STARTING FUEL DELIVERY
Rated speed rpm : 500	Rated speed rpm : 100
Pressure hPa : 350 rack travel mm : 12.25 Tolerance mm : + 0.15	+ Del. quantity + cm3/1000 strokes : 105.0 + Tolerance
Tolerance mm : + 0.15 Pressure hPa : 200	cm3/1000 strokes : + 5.0 Check tolerance
rack travel mm : 11.25 Tolerance mm : + 0.05	cm3/1000s. : +- 8.0
OTANT OUT	+
START CUT-OUT	LOW IDLE
Rated speed rpm : > 100 Rated speed rpm : < 220	Rated speed rpm : 300 rack travel mm : 6.20
Check speed 1/min : > 80	Tolerance mm : +- 0.20 + Del. quantity
Check speed 1/min : < 250	cm3/1000 strokes : 11.0 Tolerance
FUEL DELIVERY CHARACTERISTICS	cm3/1000 strokes : + 2.0 + Check tolerance + cm3/1000s. : + 4.5
Aneroid pressure	+ Spreed + Tolerance
hPa : 1000 Rated speed rpm : 600	cm3/1000 strokes : 3.5 Check tolerance
Del. quantity cm3/1000 strokes : 86.5	cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05,12,95 Test oil

: ISO 4113

Combination No. : 0 403 446 334

Injection pump

Pump designation : PES6MW10G/720RS1243

EP type number : 0 413 406 243

Governor

Governer design. : RQV325...1350MW153K

: 0 420 083 982 Governer no.

Cust. part No.

Customer-spec. information

: IVECO-FIAT Customer : 8060.45.7280 Motor

Power KW : 176.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 457 413 010

1.5 Inlet press. bar :

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar 1.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0 x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar 1.0 : +--

Prestroke mm 4.45 : ← 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm : 12.00 : + 1.00Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : + -0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 12.60

: + 0.05Tolerance mm

Del. quantity

cm3/1000 strokes : 118.5

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. • +--3.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

	+	
Check tolerance cm3/1000s.	: 7.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 325	Rated speed rpm : 700 Aneroid pressure
Rack travel in mm Tolerance mm	5.60 : + 0.10	hPa : 1200 Del. quantity
Del. quantity cm3/1000 strokes	1	cm3/1000 strokes : 118.5
Tolerance cm3/1000 strokes	+	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s.	: +- 4.5	cm3/1000s. : +- 3.0 Spreed
Spreed Tolerance	+	Tolerance cm3/1000 strokes : 4.5
cm3/1000 strokes Check tolerance	·· +	Check tolerance cm3/1000s. : 7.0
cm3/1000s.	: 4.5	
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	CONTROL LEVER
	†	control lever
GUIDE SLEEVE TRAV	EL	position degree : 122.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 325	RATED SPEED
travel mm Tolerance mm	: 1.83 : + 0.20	rack travel mm : 13.90 Rated speed rpm : 1425 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 1442	rack travel mm : 4.00
travel mm Tolerance mm	: 10.60 : + 0.15	Rated speed rpm : 1545 Tolerance 1/min : + 15
Rated speed rpm guide sleeve	: 902	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm Tolerance mm	: 5.88 : ← 0.25	Rated speed rpm : 1650
Rated speed rpm	: 470	LOW TOLE
guide sleeve travel mm	: 3.47	LOW IDLE
Tolerance mm	: +- 0.25	control lever
Rated speed rpm guide sleeve	+	position degree : 77.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 13.50 : + 0.50	Testing:
GUIDE SLEEVE POSIT	TION	Rated speed rpm : 325 rack travel mm : 5.60
Rated speed rpm	: 1500	Tolerance mm : +- 0.10
Rack travel in mm Tolerance mm		Rated speed rpm : 200 CRT mm min. :> 8.00
TO COLORIGE HAIR	1	mm min

		+	Tolerance	
TORQUE CONTROL		<u> </u>	cm3/1000 strokes Check tolerance	: +- 2.0
TOTAGE CONTINUE		Ţ	cm3/1000s.	: +- 5.0
Rated speed rpm	: 700	+	Spreed	
rack travel mm		†	Tolerance	
Toterance mm	: + 0.05	1	cm3/1000 strokes Check tolerance	: 6.0
Rated speed rpm	: 1200	I	cm3/1000s.	: 9.0
rack travel mm	: 14.70	+		
Tolerance mm	: ← 0.10	+	Aneroid pressure	
Rated speed rpm	: 900	Ī	hPa Rated speed rpm	: 1200 : 900
rack travel mm		1	Del. quantity	. 200
Tolerance mm	: ← 0.10	+	cm3/1000 strokes	: 122.0
Dakad amaad uum	. 4750	†	Tolerance	4.5
Rated speed rpm rack travel mm		İ	cm3/1000 strokes Check tolerance	: +- 1.5
Tolerance mm	: + 0.10	I	cm3/1000s.	: + 4.0
	,	+		
ALIEDATA /AI TYTIAT		+	Aneroid pressure	. 4200
ANEROID/ALTITUDE COMPENSATOR TEST		Ī	hPa Rated speed rpm	: 1200 : 1350
COM ENOMION TEDI		<u></u>	Del. quantity	. 1330
		+	cm3/1000 strokes	: 127.0
SETTING		+	Tolerance	
Rated speed rpm	: 1350	Ī	cm3/1000 strokes Check tolerance	: +- 2.0
Pressure hPa	: 1200	I	cm3/1000s.	: +- 5.0
rack travel mm	: 14.90	+		
Tolerance mm	: ← 0.10	†	Aneroid pressure	
MEASUREMENT		İ	hPa Rated speed rpm	500
MEMOOREMENT		Ţ	Del. quantity	. 566
Pressure hPa	: -	+	cm3/1000 strokes	: 73.0
Rated speed rpm		+	Tolerance	4.6
rack travel mm Tolerance mm	: 9.25 : +- 0.10	1	cm3/1000 strokes Check tolerance	: +- 1.0
TO CET OFFICE TIME	0.10	I	cm3/1000s.	: +- 3.0
Rated speed rpm	: 1350	+		
Dun	. 000	+	COPALALIÀV	
Pressure hPa rack travel mm	: 800 : 13.00	Ī	BREAKAWAY	
Tolerance mm	: + 0.15	1		
		+	Rack travel in mm	
Pressure hPa	: 300	†	Rated speed rpm Tolerance 1/min	
rack travel mm Tolerance mm	: 10.05 : + 0.05	I	Toterance Timin	; +- 3
TOGET GITCE TIAN	0.05	1		
		+		
			WARM-START DELIVE	DY
FUEL DELIVERY CHAP	RACTERISTICS	I	MAULI SIMKI DELIVE	11.1
		+	Rated speed rpm	: 100
Aneroid pressure	4000	+	Del. quantity	. /
hPa Rated speed rpm	: 1200 : 1200	1	cm3/1000 strokes Tolerance	: 45.0
Del. quantity	. 1200	I	cm3/1000 strokes	: +- 10.0
cm3/1000 strokes	: 128.0	+	Check tolerance	
		+	cm3/1000s.	: + 13.0

COLD-START DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 100.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 13.0

LOW IDLE

325 Rated speed rpm rack travel mm 5,60 : + 0.10Tolerance mm Del. quantity 20.0 cm3/1000 strokes Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000S. 4.5 Spreed Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05,12,95 Test oil : ISO 4113

Combination No. : 0 403 446 335

Injection pump

Pump designation : PES6MW100/720RS1243 EP type number : 0 413 406 243

Governor

Governer design. : RQV325...1350MW152K

: 0 420 083 981 Governer no.

Cust. part No. :

Customer-spec. information

: IVECO-FIAT Customer : 8060.45.7200 Motor Power KW : 167.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0 x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 4,45 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm: 12.00 : + 1.00 Tolerance mm

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm 700

Rack travel in mm : 12.60

Tolerance mm : **←** 0.05

Det. quantity cm3/1000 strokes :

118.5

Tolerance

cm3/1000 strokes 1.0 : +-

Check tolerance cm3/1000s. : +-3.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

	+	
Check tolerance cm3/1000s.	: 7.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 325	Rated speed rpm : 700 Aneroid pressure
Rack travel in mm Tolerance mm	: 5.00 : + 0.10	hPa : 1200 Del. quantity
Del. quantity cm3/1000 strokes	+	cm3/1000 strokes : 118.5
Tolerance cm3/1000 strokes	: + 2.0	cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s.	: + 4.5	cm3/1000s. : + 3.0 Spreed
Spreed Tolerance	†	Tolerance cm3/1000 strokes : 4.5
cm3/1000 strokes Check tolerance cm3/1000s.	: 2.0	Check tolerance cm3/1000s. : 7.0
CIID7 10003.	· •	
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	CONTROL LEVER
	+	control lever
GUIDE SLEEVE TRAVE	EL ‡	position degree : 124.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve	: 325	RATED SPEED
travel mm	: 1.83	rack travel mm : 12.00
Toterance mm	: + 0.20	Rated speed rpm : 1425 Tolerance 1/min : + 5
Rated speed rpm guide sleeve	: 1412	rack travel mm : 4.00
travel mm	: 10.24 I	Rated speed rpm : 1540
Tolerance mm	: + 0.15	Tolerance 1/min : + 15
Rated speed rpm guide sleeve	: 887	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm Tolerance mm	5.79 : + 0.25	Rated speed rpm : 1630
Rated speed rpm guide sleeve	: 470	LOW IDLE
travel mm	: 3.47	
Tolerance mm	: +- 0.25	annhari Javan
Rated speed rpm guide sleeve	: 1670	control lever position degree : 77.0 tolerance degree : +- 4.0
travel mm	: 13.50	total alloc degree The
Tolerance mm	: + 0.50	Testing:
GUIDE SLEEVE POSIT	FION	Rated speed rpm : 325 rack travel mm : 5.00 Tolerance mm : + 0.10
Rated speed rpm	: 1450	
Rack travel in mm		Rated speed rpm : 200
Tolerance mm	: +- 2.50 +	CRT mm min. : > 7.50

	+ Tolerance
TORQUE CONTROL	cm3/1000 strokes : +- 1.5 Check tolerance
700	+ cm3/1000s. : + 4.0
Rated speed rpm : 700 rack travel mm : 12.60	+ Spreed + Tolerance
Tolerance mm : + 0.05	cm3/1000 strokes : 6.0
10101 01100 11111	- Check tolerance
Rated speed rpm : 1200	+ cm3/1000s. : 9.0
rack travel mm : 14.25	***************************************
Tolerance mm : + 0.10	+ Aneroid pressure + hPa : 1200
Rated speed rpm : 900	Rated speed rpm : 900
rack travel mm : 13.30	+ Del. quantity
Tolerance mm : + 0.10	+ cm3/1000 strokes : 120.5
Rated speed rpm : 1350	+ Tolerance + cm3/1000 strokes : + 1.5
rack travel mm : 14.25	Check tolerance
Tolerance mm : + 0.10	+ cm3/1000s. : + 4.0
	+ 1
ANEROID/ALTITUDE	+ Aneroid pressure + hPa : 1200
COMPENSATOR TEST	Rated speed rpm : 1350
THE STATE OF THE S	+ Del. quantity
	- cm3/1000 strokes : 121.0
SETTING	Tolerance
Rated speed rpm : 500	+ cm3/1000 strokes : +- 1.5 + Check tolerance
Pressure hPa : 1200	cm3/1000s. : +- 4.0
rack travel mm : 11.80	+
Tolerance mm : +- 0.10	Aneroid pressure
MEASUREMENT	+ hPa : - Rated speed rpm : 500
HENDOIVEUEIAL	Del. quantity
Pressure hPa : -	+ cm3/1000 strokes : 69.0
Rated speed rpm : 500	† Tolerance
rack travel mm : 9.10 Tolerance mm : + 0.10	+ cm3/1000 strokes : + 1.0 + Check tolerance
Total arte likit	- cm3/1000s. : + 3.0
Rated speed rpm : 500	+
500	DOCAMANAN
Pressure hPa : 500 rack travel mm : 11.25	+ BREAKAWAY
Tolerance mm : + 0.10	1
	Rack travel in mm: 12.00
Pressure hPa : 300	+ Rated speed rpm : 1425
rack travel mm : 10.05 Tolerance mm : + 0.05	† Toleranse 1/min : +- 5
Total lice limit	1
	+
	LIADM_CTART ACI TUERV
FUEL DELIVERY CHARACTERISTICS	+ WARM-START DELIVERY
	Rated speed rpm : 100
Aneroid pressure	+ Del. quantity
hPa : 1200 Rated speed rpm : 1200	+ cm3/1000 strokes : 45.0 + Tolerance
Del. quantity	+ cm3/1000 strokes : +- 10.0
cm3/1000 strokes : 124.0	+ Check tolerance
	+ cm3/1000s. : +- 13.0

COLD-START DELIVERY 100 Rated speed rpm : Del. quantity cm3/1000 strokes : 100.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 13.0 LOW IDLE Rated speed rpm 325

rack travel mm 5.00 Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes 2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 2.0 Check tolerance cm3/1000s. 4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.12.95 Test oil : ISO 4113

Combination No. : 0 403 476 117

Injection pump

Pump designation : PES6MW100/720RS1131

: -1

EP type number : 0 413 406 165

Governor

Governer design. : RSV750...1200MW0A329

: -15

Governer no. : 0 420 085 193

Cust. part No. : 0220748502

Customer—spec. information Customer : MB-NFZ Motor : OM366LA Power KW : 148.0

Fower Rw : 140.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0
Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : ← 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1180

Rack travel in mm: 13.15

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 104.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance	+
cm3/1000 strokes : 3.5	control lever
Chack talonana	position degree : 97.0
Check tolerance - cm3/1000S. : 6.0 -	tolerance degree : +- 4.0
(1107 10003)	RATED SPEED
Rated speed rpm : 750	MATER OF EED
	rack travel mm : 1.00
Rack travel in mm: 4.70	Tolerance mm : + 0.70
Tolerance mm : + 0.40	Rated speed rpm : 1400
Del. quantity	ACCEMBLY COVERNOR OFFETALO
cm3/1000 strokes : 12.0 - Tolerance -	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : +- 2.0	Rated speed rpm : 1230
Check tolerance	rack travel mm : 12.10
cm3/1000s. : +- 4.5	-
Spreed -	- Rated speed rpm : 1314
Tolerance	Tolerance 1/min : + 4
cm3/1000 strokes : 3.5	rack travel mm : 4.00
Check tolerance - cm3/1000s. : 5.5 -	- Rated speed rpm : 1231
CIRD (0008. : 3.3	- Rated speed rpm : 1231 - rack travel mm : 12.10
	- Tack Gray. C tien . TE. 10
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1315
WITH GOVERNOR	- Tolerance 1/min : ← 4
	rack travel mm : 4.00
	- - Rated speed rpm : 1232
GUIDE SLEEVE POSITION -	- Rated speed rpm : 1232 - rack travel mm : 12.10
	- Tuck Gravee and Tello
Rated speed rpm : 800	Rated speed rpm : 1316
	Tolerance 1/min : +- 4
Rack travel in mm: 0.65	- rack travel mm : 4.00
Tolerance mm : +- 0.35	- Rated speed rpm : 1233
governor spring	- Rated speed rpm : 1233 - rack travel mm : 12.10
pre-tension	
click setting x : 4.00	- Rated speed rpm : 1317
1	- Tolerance 1/min : +- 4
	rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Dated anned non 4270
Rated speed rpm : 1180	- Rated speed rpm : 1238 - rack travel mm : 12.10
Aneroid pressure	
hPa : 1000	- Rated speed rpm : 1322
Del. quantity	- Tolerance 1/min : +- 4
cm3/1000 strokes : 104.0	rack travel mm : 4.00
Tolerance	
cm3/1000 strokes : + 1.0	- Rated speed rpm : 1239 - rack travel mm : 12.10
Check tolerance cm3/1000s. : +- 3.0	rack travet mm : 12.10
Spreed	- Rated speed rpm : 1323
Tolerance	Tolerance 1/min : + 4
cm3/1000 strokes : 3.5	rack travel mm : 4.00
Check tolerance	•
cm3/1000s. : 6.0	LOU TOUT
1	- LOW IDLE
7	

CONTROL LEVER

		+	
control lever position degree tolerance degree		FUEL DELIVERY CHAI	RACTERISTICS
Testing:		+ Aneroid pressure + hPa	: 1000
_	. 750	+ Rated speed rpm	: 600
Rated speed rpm rack travel mm Tolerance mm	: 750 : 4.70 : + 0.25	+ Del. quantity + cm3/1000 strokes + Tolerance	: 97.0
and Annual an	: 2.00	+ cm3/1000 strokes	: + 1.5
rack travel mm Rated speed rpm Tolerance 1/min	: 775	theck tolerance cm3/1000s. Spreed Tolerance	: + 4.0
Rated speed rpm	: 100	tolerance cm3/1000 strokes Check tolerance	: 5.0
CRT mm min.	: > 19.00	cm3/1000s.	: 7.0
TORQUE CONTROL		- Aneroid pressure	: -
Rated speed rpm	: 1180	Rated speed rpm Del. quantity	: 500
rack travel mm	: 13.15	+ cm3/1000 strokes	: 43.0
Tolerance mm	: +- 0.05	+ Tolerance + cm3/1000 strokes	: + 1.0
Rated speed rpm rack travel mm	: 600 : 13.15	+ Check tolerance + cm3/1000s.	: +- 3.0
Tolerance mm	: +- 0.10	- 4.0000	. , 5.0
ANEROID/ALTITUDE			
COMPENSATOR TEST		STARTING FUEL DELI	EVERY
A = = = = = = = = = = = = = = = = = = =		Rated speed rpm	: 100
SETTING		+ Del. quantity + cm3/1000 strokes	: 105.0
Rated speed rpm	: 500 : 1000	Tolerance cm3/1000 strokes	: + 5.0
Pressure hPa rack travel mm	: 1000 : 13.15	+ Check tolerance	5.0
Tolerance mm	: + 0.05	cm3/1000s.	: +- 8.0
MEASUREMENT		‡	
Pressure hPa Rated speed rpm Tolerance mm	500 + 0.10	LOW IDLE	
Rated speed rpm	: 500	+ Rated speed rpm - rack travel mm	: 750 : 4.70
		+ Tolerance mm	: +- 0.40
Pressure hPa rack travel mm	: 500 : 2.20	+ Del. quantity + cm3/1000 strokes	: 12.0
Tolerance mm	: + 0.15	+ Tolerance	
Pressure hPa	: 350	+ cm3/1000 strokes + Check tolerance	: +- 2.0
rack travel mm Tolerance mm	: 1.10 : + 0.05	cm3/1090s.	: +- 4.5
		Tolerance cm3/1000 strokes	: 3.5
			

:	5.5
	:

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.12.95 Test oil : ISO 4113

Combination No. : 0 400 836 021

Injection pump

Pump designation : PES6A80D410/3RS2527

EP type number : 0 410 886 059

Governor

Governer design. : RQV300...1400AB951DL

Governer no. : 0 420 214 215

Cust. part No.

Customer—spec. information Customer : KHD

Motor : F6L912

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.95
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 12.05
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 69.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed Tolerance

cm3/1000 strokes :

2.5

Check tolerance +	Del. quantity
cm3/1000s. : 4.0 +	cm3/1000 strokes : 69.5
+	Tolerance
Rated speed rpm : 300	cm3/1000 strokes : + 0.5
	Check tolerance
Rack travel in mm: 6.00	cm3/1000s. : +- 2.0
Tolerance mm : + 0.10	Spreed
Del. quantity +	Tolerance
cm3/1000 strokes : 12.0 +	cm3/1000 strokes : 2.5
Tolerance	Check tolerance
cm3/1000 strokes : + 1.5	cm3/1000s. : 4.0
Check tolerance	
cm3/1000s. ; + 3.5	
Spreed	
Tolerance	CONTROL LEVER
cm3/1000 strokes : 4.0	odiffice Edich
Check tolerance	control lever
cm3/1000s. : 6.0 +	position degree : 103.0
†	tolerance degree : +- 4.0
+	
(B) SETTING OF INJECTION PUMP	RATED SPEED
WITH GOVERNOR +	
<u></u>	rack travel mm : 11.00
	Rated speed rpm : 1445
GUIDE SLEEVE TRAVEL	Tolerance 1/min : + 5
GOIDE GEEFAE WAVEE	rocei di toe Trimiti
Rated speed rpm : 300	rack travel mm : 4.00
the second secon	
guide sleeve +	Rated speed rpm : 1550
travel mm : 1.20 +	Tolerance 1/min : +- 15
Tolerance mm : + 0.15	
+	rack travel mm : 0.50
Rated speed rpm : 1454	Tolerance mm : \leftarrow 0.50
The sea of sea of the	
quide sleeve	Rated speed rpm : 1700
guide sleeve	Rated speed rpm : 1700
travel mm : 8.60	Rated speed rpm : 1700
	Rated speed rpm : 1700
travel mm : 8.60 Tolerance mm : + 0.15	
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970	Rated speed rpm : 1700 LOW IDLE
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve	
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00	LOW IDLE
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve	
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00	LOW IDLE
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25	LOW IDLE control lever position degree : 50.0
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720	LOW IDLE
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve	LOW IDLE control lever position degree : 50.0 tolerance degree : +- 4.0
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50	LOW IDLE control lever position degree : 50.0
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve	LOW IDLE control lever position degree : 50.0 tolerance degree : + 4.0 Testing:
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50	LOW IDLE control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50	LOW IDLE control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50	LOW IDLE control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION	LOW IDLE control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : → 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50 Tolerance mm : → 1.30	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50
travel mm : 8.60 Tolerance mm : + 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : + 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : + 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50 Rated speed rpm : 495
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : → 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50 Tolerance mm : → 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : → 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50 Tolerance mm : → 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1400	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50 Rated speed rpm : 495 TORQUE CONTROL
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : → 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50 Tolerance mm : → 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1400 Aneroid pressure	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50 Rated speed rpm : 495 TORQUE CONTROL Dimension a mm : 0.80
travel mm : 8.60 Tolerance mm : → 0.15 Rated speed rpm : 970 guide sleeve travel mm : 5.00 Tolerance mm : → 0.25 Rated speed rpm : 1720 guide sleeve travel mm : 11.50 Tolerance mm : → 0.50 GUIDE SLEEVE POSITION Rated speed rpm : 1440 Rack travel in mm : 16.50 Tolerance mm : → 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1400	control lever position degree : 50.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 7.50 Rated speed rpm : 495 TORQUE CONTROL

rack travel mm Tolerance mm	: 12.05 : + 0.05
roterance mm	: +- 0.05
Rated speed rpm	
rack travel mm	: 12.85
Tolerance mm	: +- 0.10
Rated speed rpm	: 1045
rack travel mm	: 12.70
Tolerance mm	: - 0.10
Rated speed rpm	• 1150
rack travel mm	
Tolerance mm	: +- 0.10
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100
Rated speed rpm	: < 220
Check	
speed 1/min	: > 80
Check	
speed 1/min	: < 240
FUEL DELIVERY CHA Aneroid pressure hPa	: -
Rated speed rpm	
Del. quantity	
cm3/1000 strokes	: 65.5
Tolerance cm3/1000 strokes	: + 1.5
Check tolerance	
cm3/1000s.	: +- 3.0
BREAKAWAY	
CHECKING I	
Dank tonical in	. 11 00
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1445
Tolerance 1/min	: +- 5
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100
Tolerance mm	: +- 0.15
	- · · ·
IOW TOLE	

Rated speed rpm	:	300
rack travel mm	:	6.00
Tolerance mm	: +-	0.10
Del. quantity		
cm3/1000 strokes	;	12.0
Tolerance		
cm3/1000 strokes	: +-	1.5
Check tolerance		
cm3/1000S.	: +-	3.5
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000s.	:	6.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... Edition : 11.12.95 : ISO 4113 Test oil Combination No. : 0 400 876 430 Injection pump Pump designation : PES6A95D410RS2864 EP type number : 0 410 896 888 Governor : RSV400...1050A2C2263 Governer design. : -10L : 0 420 232 619 Governer no. : 87 800 862 Cust, part No. Customer-spec, information : FNH-GEOTECH Customer : P 396 Motor : 142.0 Power KW TEST BENCH REQUIREMENTS Inlet line : 1.3 Test oil inlet temp. °C : +- 2.0 Tolerance °C : 1 419 992 198 Overflow valve 1.5 Inlet press. bar : Test nozzle holde : 1 688 901 101 assembly Opening pressure 208.5 Tolerance bar 1.5 : 1 680 750 008 Test lines

x inside diameter: 2.0 x length mm 600 : REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : + 1.0 Prestroke mm 2.60 : + 0.05Tolerance mm Check : + - 0.10tolerance mm Rack travel in mm: 10.50 : +- 1.50 Tolerance mm : 1-5-3-6-2-Firing order : 4 Phasing : 0-60-120-180-240 : -300 BASIC SETTING Rated speed rpm 750 Rack travel in mm : 15.00 : +- 0.05 Tolerance mm Del. quantity cm3/1000 strokes : 154.0 Tolerance cm3/1000 strokes 1.0 : +-Check tolerance cm3/1000s. 3.0 : +-Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 8.0

Outside diameter :

6.0

	1
Rated speed rpm : 450	ASSEMBLY GOVERNOR SETTING
Rack travel in mm: 5.70 Tolerance mm: + 0.10	Rated speed rpm : 1093 rack travel mm : 12.40
Del. quantity cm3/1000 strokes : 15.0 Tolerance	Rated speed rpm : 1163 Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : + 4.5 Spreed Tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000 strokes : 5.5 Check tolerance	Rated speed rpm : 1094 rack travel mm : 12.40
cm3/1000s. : 9.0	Rated speed rpm : 1164
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : + 5 rack travel mm : 4.00
	rack travel mm : 0.85 Tolerance mm : + 0.55
GUIDE SLEEVE POSITION Rated speed rpm : 800	Rated speed rpm : 1095 rack travel mm : 12.40
Rack travel in mm: 0.50	Rated speed rpm : 1165 Tolerance 1/min : + 5
Tolerance mm : + 0.20	rack travel mm : 4.00
governor spring pre-tension click setting x : 4.00	rack travel mm : 0.85 Tolerance mm : + 0.55
	Rated speed rpm : 1096 rack travel mm : 12.40
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1166
Rated speed rpm : 750 Aneroid pressure	Tolerance 1/min : + 5 rack travel mm : 4.00
hPa : 1200 Del. quantity cm3/1000 strokes : 154.0	rack travel mm : 0.85 Tolerance mm : + 0.55
Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 1097 rack travel mm : 12.40
cm3/1000S. : + 3.0 Spreed	+ Rated speed rpm : 1167
Tolerance cm3/1000 strokes : 3.5	Tolerance 1/min : + 5 rack travel mm : 4.00
Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : + 0.55
	- Rated speed rpm : 1098
CONTROL LEVER	rack travel mm : 12.40
control lever position degree : 93.0 tolerance degree : + 4.0	Rated speed rpm : 1168 Tolerance 1/min : +- 5 rack travel mm : 4.00
	+

rack travel mm : 0.8 Tolerance mm : + 0.9		MEASUREMENT	
LOW IDLE		Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 9.30
control lever position degree : 72 tolerance degree : + 4		Rated speed rpm	
Setting point w/out bumper	spring I	Pressure hPa rack travel mm Tolerance mm	
Rated speed rpm : 450 rack travel mm : 5.3		Pressure hPa	: 500
Testing:	†	Tolerance mm	: + 0.20
Rated speed rpm : 450 rack travel mm : 5.7 Tolerance mm : + 0.7	70 +		
rack travel mm : 2.0 Rated speed rpm : 590 Tolerance 1/min : + 3	+	FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: -
TORQUE CONTROL	+	Del. quantity cm3/1000 strokes	: 76.5
Rated speed rpm : 750 rack travel mm : 15.0 Tolerance mm : + 0.0		Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	
Rated speed rpm : 500 rack travel mm : 15.1 Tolerance mm : + 0.1			
Rated speed rpm : 1050 rack travel mm : 12.9 Tolerance mm : + 0.0		Rated speed rpm rack travel mm	
Rated speed rpm : 1050 rack travel mm : 13.4 Tolerance mm : + 0.1		Tolerance mm Del. quantity cm3/1000 strokes Tolerance	: 165.0
Rated speed rpm : 950 rack travel mm : 14.3 Tolerance mm : + 0.1		cm3/1000 strokes Check tolerance cm3/1000s.	: + 8.0 : + 11.0
ANEROID/ALTITUDE COMPENSATOR TEST	<u> </u>	LOW IDLE	
SETTING	-	Rated speed rpm rack travel mm Tolerance mm	: 450 : 5.70 : +- 0.10
Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 15.1 Tolerance mm : + 0.1		Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	

Check tolerance cm3/1000s.	: +-	4.5
Spreed		
Tolerance cm3/1000 strokes Check tolerance	:	5.5
cm3/1000s.	:	9.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 08.12.95 Edition Edition : 08.12.95 Test oil : ISO 4113

Combination No. : 0 401 849 757

Injection pump

Pump designation : PE10P120A520/4LS3863

EP type number : 0 411 897 711

Governor

Governer design. : RQ300/900PA1230

Governer no. : 0 421 801 792

Cust. part No. :

Customer-spec. information

Customer : DAEWOO Motor : D2840LE

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Overflow quantity

min. l/h : 100 Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar

: +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

: 4.05 : +- 0.05 Prestroke mm

Tolerance mm Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 10-9-4-1-8 Firing order

: - 7- 6- 3- 5

: - 2

Phasing : 0-45-72-117-144

: -189-216-261-288

: -333

Tolerance : +- 0.30

Check

tolerance "NW : + 0.50

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

10 Barrel no.

BASIC SETTING

850 Rated speed rpm :

12.90

Rack travel in mm :

		**
Tolerance mm : +- (0.05 +	
	+	Rated speed rpm : 510
Del. quantity	+	guide sleeve
cm3/1000 strokes : 20	08.0	travel mm : 6.00
Tolonopoo		Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : +-	1.0 I	Rated speed rpm : 1050
CIID/ 1000 Strokes	1.0	guide sleeve
Check tolerance		travel mm : 11.50
cm3/1000s. : +-	4.0	Tolerance mm : + 0.50
-		
Spreed	†	OUTD'E OLEGUE DOCTTYON
Tolerance cm3/1000 strokes :	6.0	GUIDE SLEEVE POSITION
CIBY 1000 Strokes .	I	Rated speed rpm : 600
Check tolerance		nated space i pin . Ooo
	10.0	Rack travel in mm : 20.00
	+	Tolerance mm : +- 0.80
Rated speed rpm : 30	00 +	
Dank Annual da am a	7 00 +	FULL LOAD DELIVERY AT FULL LOAD STOP
	7.00 0.30 +	FOLL LOAD DELIVERY AT POLL LOAD STOP
Del. quantity	I	Rated speed rpm : 850
	24.0	Aneroid pressure
Tolerance	+	hPa : -
	3.0	Del. quantity
Check tolerance	+	cm3/1000 strokes : 208.0
cm3/1000s. : +-	6.0	Tolerance
Spreed	†	cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes :	7.0	cm3/1000S. : + 4.0
Check tolerance	1.0	Spreed
	11.0	Tolerance
	+	cm3/1000 strokes : 6.0
	+	Check tolerance
(B) SETTING OF INJECTION	PUMP +	cm3/1000s. : 10.0
WITH GOVERNOR	†	
	I	
GUIDE SLEEVE TRAVEL	1	CONTROL LEVER
	+	
Rated speed rpm : 30	DO +	control lever
guide sleeve	. , , †	position degree : 32.0
	1.44	tolerance degree : +- 4.0
Tolerance mm : + C	0.10	control lever
Rated speed rpm : 93	32	position degree : 94.0
guide sleeve	_	tolerance degree : +- 4.0
travel mm : 6	5.37	
Tolerance mm : + 0	3.10 +	RATED SPEED
	· ·	ments described and a 14 00
Rated speed rpm : 88	³⁰ †	rack travel mm : 11.90 Rated speed rpm : 925
guide sleeve travel mm : 6	s.00 I	Tolerance 1/min : +- 5
	J. 10 T	rotor dried (7) in 11 1 1 2
TO COT GITTOU THAT	1	rack travel mm : 4.00
Rated speed rpm : 43	33 +	Rated speed rpm : 970
guide sleeve	+	Tolerance 1/min : + 15
	+.94	
Tolerance mm : +- 0).10 +	rack travel mm : 0.50

Tolerance mm Rated speed rpm	: + 0.50 : 1100	Del. quantity cm3/1000 strokes : 212.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
LOW IDLE		cm3/1000s. : +- 6.0
control lever position degree tolerance degree		BREAKAWAY Rack travel in mm : 11.90
control lever position degree tolerance degree		Rated speed rpm : 925 Tolerance 1/min : + 5
Testing:		STARTING FUEL DELIVERY
Rated speed rpm rack travel mm Tolerance mm	: 7.00	Del. quantity cm3/1000 strokes : 200.0 Tolerance
rack travel mm Rated speed rpm Tolerance 1/min	: 415	cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0
Rated speed rpm	: 200	+
CRT mm min.	; > 9.40	LOW IDLE
TORQUE CONTROL		Rated speed rpm : 300
Rated speed rpm rack travel mm	: 12.90	rack travel mm : 7.00 Tolerance mm : + 0.30 Del. quantity
Tolerance mm	: +- 0.05	cm3/1000 strokes : 24.0 Tolerance
Rated speed rpm rack travel mm Tolerance mm		cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed
		Tolerance cm3/1000 strokes : 7.0
START CUT-OUT		Check tolerance cm3/1000s. : 11.0
Rated speed rpm Rated speed rpm	: > 100 : < 220	
Check speed 1/min Check	: > 80	
speed 1/min	: < 240	End of test specification sheet
FUEL DELIVERY CHA	RACTERISTICS	1
		<u>†</u>
Aneroid pressure hPa		Ŧ
Rated speed rpm	: 650	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 08.12.95 : ISO 4113

Combination No. : 0 401 876 793

Injection pump

Pump designation : PE6P12OA32ORS3314 EP type number : 0 411 826 806

Governor

Governer design. : RSV350...1100F1A559

Governer no.

: 0 421 833 389

Cust, part No. : 1342534

Customer-spec. information Customer : SCANIA : D9 Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C 40 Tolerance *C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 : +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

: +- 0.50 tolerance "NW

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

11.45 Rack travel in mm: Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 152.0

012

	Tolerance
Tolerance	cm3/1000 strokes : 8.0
cm3/1000 strokes : + 1.0	Check tolerance
	cm3/1000s. : 12.0
Check tolerance	
cm3/1000s. : + 4.0 +	
Spreed	CONTROL LEVER
Tolerance	CONTROL LEVER
cm3/1000 strokes : 8.0	control lever
	position degree : 40.0
Check tolerance	tolerance degree : + 4.0
cm3/1000s. : 12.0 +	
†	control lever position degree : 90.0
Rack travel in mm: 5.20	tolerance degree : +- 4.0
Tolerance mm : + 0.10	toterance degree 4.0
Del. quantity	
cm3/1000 strokes : 18.0	ASSEMBLY GOVERNOR SETTING
Tolerance	
cm3/1000 strokes : + 4.0	Rated speed rpm : 750
Check tolerance cm3/1000s. : +- 6.0	rack travel mm : 10.45
Spreed +	Rated speed rpm : 788
Tolerance	Tolerance 1/min : + 4
cm3/1000 strokes : 5.0	rack travel mm : 4.00
Check tolerance	
cm3/1000s. : 9.0	rack travel mm : 0.85
†	Tolerance mm : +- 0.55 Rated speed rpm : 850
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 850
WITH GOVERNOR	Rated speed rpm : 751
	rack travel mm : 10.45
+	
	Rated speed rpm : 789
GUIDE SLEEVE POSITION	Tolerance 1/min : +- 4 rack travel mm : 4.00
Rated speed rpm : 800	rack travel mm : 4.00
Tared speed (pill : 500	rack travel mm : 0.85
Rack travel in mm: 0.50	Tolerance mm : + 0.55
Tolerance mm : + 0.20 +	Rated speed rpm : 850
+	
•	750
governor spring	Rated speed rpm : 752
pre-tension +	Rated speed rpm : 752 rack travel mm : 10.45
pre-tension +	Rated speed rpm : 752 rack travel mm : 10.45 Rated speed rpm : 790 Tolerance 1/min : + 4
pre-tension +	Rated speed rpm : 790
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : -	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850 Rated speed rpm : 753
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 152.0 Tolerance	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 10.45
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 10.45 Rated speed rpm : 791
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 10.45 Rated speed rpm : 791 Tolerance 1/min : + 4
pre-tension click setting x : 3.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 790 Tolerance 1/min : + 4 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 850 Rated speed rpm : 753 rack travel mm : 10.45 Rated speed rpm : 791

rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 10.45
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 10.45
Rated speed rpm	: 793
Tolerance 1/min	: + 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 850
TOPOUE CONTROL	
TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 11.45
Tolerance mm	: + 0.05

ANEROID/ALTITUDE
COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 11.45
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.00
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 180 rack travel mm : 10.50 Tolerance mm : \leftarrow 0.15

Pressure hPa : 250

rack travel mm : 10.95 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 116.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : \leftarrow 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.00 Tolerance mm : + 0.20

Del. quantity

cm3/1000 strokes : 90.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.95 Test oil : ISO 4113

Combination No. : 0 402 044 700

Injection pump

Pump designation : PES4P110A320RS3350

EP type number : 0 412 014 700

Governor

Governer design. : RQV350...1400PA1221K

Governer no. : 0 421 815 472

Cust. part No. : 16700-D8703 / M

: -2004

Customer-spec. information Customer : NMI

Motor : 84.40 EURO II

Power KW : 101.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40 Tolerance *C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.55

Tolerance mm : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 4-2-1-3

Phasing : 0-90-180-270

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

*NW after s.o.d. : 180.00

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 4

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 15.40

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 178.0

		+ Tolerance mm : + 0.50
Tolerance cm3/1000 strokes	: +- 1.0	<u> </u>
		GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: + 3.0	Rated speed rpm : 1515
Spreed		Rack travel in mm: 14.50
Tolerance		+ Tolerance mm : + 1.30
cm3/1000 strokes	: 5.0	<u> </u>
Check tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000S.	: 9.0	+
Datad annal ana	. 750	+ Rated speed rpm : 1300
Rated speed rpm	: 350	+ Aneroid pressure + hPa : 1500
Rack travel in mm	9.50	Del. quantity
Toterance mm	: +- 0.30	+ cm3/1000 strokes : 178.0
Del. quantity		+ Tolerance
cm3/1000 strokes	: 31.0	+ cm3/1000 strokes : +- 1.0
Tolerance		+ Check tolerance
cm3/1000 strokes Check tolerance	: +- 2.5	+ cm3/1000s. : + 3.0 + Spreed
cm3/1000s.	: +- 5.0	Tolerance
Spreed	3.0	+ cm3/1000 strokes : 5.0
Tolerance		Check tolerance
cm3/1000 strokes	: 6.0	+ cm3/1000s. : 9.0
Check tolerance	40.0	†
cm3/1000s.	: 10.0	†
	·	CONTROL LEVER
(B) SETTING OF IN	JECTION PUMP	ONTINOE CETEIN
WITH GOVERNOR		control lever
	•	+ position degree : 65.0
GUIDE SLEEVE TRAVI	CI.	tolerance degree : + 4.0
GOIDE SPEEAE LYMNI		control lever
Rated speed rpm	: 350	position degree : 122.0
guide sleeve		tolerance degree : + 4.0
travel mm	: 1.46	+
Tolerance mm	: +- 0.20	RATED SPEED
Rated speed rpm	: 1417	rack travel mm : 14.40
guide sleeve	•	Rated speed rpm : 1410
travel mm	: 9.99	Tolerance 1/min : +- 5
Tolerance mm	: + 0.15	
Debad send ses	: 994	+ rack travel mm : 4.00 + Rated speed rpm : 1585
Rated speed rpm guide sleeve	: 994	+ Rated speed rpm : 1585 + Tolerance 1/min : +- 15
travel mm	: 6.77	Tocci dilec 17 iii 11
Tolerance mm	: +- 0.25	rack travel mm : 0.50
	-	Tolerance mm : + 0.50
Rated speed rpm	: 610	Rated speed rpm : 1640
guide sleeve	. 7.04	†
travel mm Tolerance mm	: 3.96 : + 0.25	İ
toteratte im	• • • • • • • • • • • • • • • • • • • •	LOW IDLE
Rated speed rpm guide sleeve	: 1730	
travel mm	: 13.50	1

control lever position degree tolerance degree control lever position degree tolerance degree	: + 4.0 : 26.0	Pressure hPa : 940 rack travel mm : 14.45 Tolerance mm : + 0.10 Pressure hPa : 520 rack travel mm : 13.25 Tolerance mm : + 0.05
Testing:		START CUT-OUT
Rated speed rpm rack travel mm Tolerance mm	: 9.50	Rated speed rpm : > 100 Rated speed rpm : > 270
Rated speed rpm	: 250	Check
CRT mm min.	: > 10.80	speed 1/min :> 80 Check
Rated speed rpm	: 500	+ speed 1/min : > 290
		ELICI DEL TUEDV CHADACTEDICTICO
TORQUE CONTROL		- + FUEL DELIVERY CHARACTERISTICS
	4770	Aneroid pressure
Rated speed rpm rack travel mm	: 1300 : 15.40	+ hPa : 1500 + Rated speed rpm : 780
Tolerance mm		+ Rated speed rpm : 780 + Del. quantity
TOCCI GITOC IMI		+ cm3/1000 strokes : 154.0
Rated speed rpm		Tolerance
rack travel mm		+ cm3/1000 strokes : + 2.0
Tolerance mm	: + 0.1 5	Check tolerance + cm3/1000s. : + 5.0
Rated speed rpm	: 1000	+ Spreed
rack travel mm	: 14.30	Tolerance
Tolerance mm		cm3/1000 strokes : 12.0
Bakad mass doma	4050	+ Check tolerance
Rated speed rpm	: 1250 : 15.40	† cm3/1000s. : 16.0
rack travel mm Tolerance mm	: +- 0.10	Aneroid pressure
		+ hPa : 1500
		- + Rated speed rpm : 1000
ANEROID/ALTITUDE		t Del. quantity cm3/1000 strokes : 165.0
COMPENSATOR TEST		+ Tolerance
		+ cm3/1000 strokes : + 3.0
SETTING		Check tolerance
Date I seemd was	4700	+ cm3/1000s. : $+$ 6.0
Rated speed rpm Pressure hPa	: 1300 : 1500	Aneroid pressure
rack travel mm	: 15.40	+ hPa : -
Tolerance mm	: +- 0.10	+ Rated speed rpm : 500
		+ Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 136.0 + Tolerance
Pressure hPa	: -	+ cm3/1000 strokes : + 1.0
Rated speed rpm	: 1300	+ Check tolerance
rack travel mm	: 12.75	+ cm3/1000s. : + 4.0
Tolerance mm	: + 0.10	†
Rated speed rpm	: 1300	BREAKAWAY

Rack travel in mm: 14.40
Rated speed rpm: 1410
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 200.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm 350 9.50 rack travel mm : +- 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 31.0 Tolerance 2.5 cm3/1000 strokes Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 08.12.95 : ISO 4113

Combination No. : 0 402 046 864

Injection pump

Pump designation: PES6P12DA320RS3337

: -1

EP type number

: 0 412 026 772

Governor

Governer design. : RQV300...1250PA1149

: -1K

Governer no.

: 0 421 815 421

Cust. part No. : CCEP 5142A 66-219

Customer-spec. information

Customer

: RVI

Motor

: MIDR 06-02-26 W4

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

: 4.15 Prestroke mm Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 13.00 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

: + 0.50Tolerance

Check

tolerance 'NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

13.15 Rack travel in mm :

Tolerance mm : \leftarrow 0.05

Del. quantity

202.5

cm3/1000 strokes :

Tolerance cm3/1000 strokes : +- 1.0	CUIDE OLEGUE POOLITION
Check tolerance cm3/1000s. : + 4.0	- GUIDE SLEEVE POSITION - Rated speed rpm : 1400
Spreed Tolerance cm3/1000 strokes : 5.0	Rack travel in mm: 12.15 Tolerance mm: + 1.30
Check tolerance cm3/1000s. 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 1250 Aneroid pressure
Rack travel in mm: -8.20 Tolerance mm: +- 0.20	hPa : 1000 Del. quantity cm3/1000 strokes : 202.5
Del. quantity cm3/1000 strokes : 28.0 Tolerance	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : + 2.0 + Check tolerance +	cm3/1000s. : +- 4.0 Spreed
cm3/1000s. : + 5.0 + 5.0 Tolerance	Tolerance : 5.0 Check tolerance
cm3/1000 strokes : 8.0 + Check tolerance +	cm3/1000s. : 9.0
cm3/1000s. : 12.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 296.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0 RATED SPEED
Rated speed rpm : 300 guide sleeve travel mm : 1.31	rack travel mm : -1.00
travel mm : 1.31 + Tolerance mm : + 0.20	Rated speed rpm : 1312 Tolerance 1/min : +- 5
Rated speed rpm : 1328 guide sleeve + travel mm : 9.98	rack travel mm : -9.20 Rated speed rpm : 1440 Tolerance 1/min : +- 15
Tolerance mm : + 0.15	rack travel mm : -12.65
Rated speed rpm : 876 guide sleeve travel mm : 6.02	Tolerance mm : +- 0.50 Rated speed rpm : 1550
Tolerance mm : ÷ 0.25	
Rated speed rpm : 510 + guide sleeve + travel mm : 3.59	LOW IDLE
Tolerance mm : + 0.25	control lever position degree : 245.0
Rated speed rpm : 1600 + guide sleeve + travel mm : 13.50 +	tolerance degree : + 4.0 Testing:
Tolerance mm : += 0.50	

Rated speed rpm rack travel mm Tolerance mm	: -8.20	+ Check speed 1/min : < 260
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: < -7.40	Aneroid pressure hPa : 1000
Rated speed rpm	: 400	Rated speed rpm : 850 Del. quantity cm3/1000 strokes : 144.0
TORQUE CONTROL		
Rated speed rpm	: 1250	Check tolerance cm3/1000s. : + 6.0
Rated speed rpm rack travel mm Tolerance mm	: -1.85	Aneroid pressure
Dated speed nom	• 350	Rated speed rpm : 1000 Del. quantity
rack travel mm Tolerance mm	: -1.60 : +- 0.30	- cm3/1000 strokes : 127.5 - Tolerance - cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		BREAKAWAY
		-
Rated speed rpm Pressure hPa rack travel mm	: 1000	+ Rack travel in mm : -1.00 + Rated speed rpm : 1312 + Tolerance 1/min : +- 5
MEASUREMENT		Ī
Pressure hPa Rated speed rpm	1000	STARTING FUEL DELIVERY
rack travel mm Tolerance mm	: -3.40 : +- 0.20	+ Rated speed rpm : 100 + Del. quantity + cm3/1000 strokes : 102.0
Rated speed rpm	: 1000	+ cm3/1000 strokes : 102.0 + Tolerance + cm3/1000 strokes : +- 15.0
Pressure hPa rack travel mm Tolerance mm	: 240 : -2.55 : +- 0.10	Check tolerance cm3/1000s. : +- 19.0
Pressure hPa rack travel mm	: 320 : -1.80	
Tolerance mm	: + 0.05	LOW IDLE
START CUT-OUT		- + Rated speed rpm : 300 + rack travel mm : -8.20 + Tolerance mm : + 0.20
Rated speed rpm Rated speed rpm	: > 175 : < 240	Del. quantity cm3/1000 strokes : 28.0 Tolerance
Check speed 1/min	: > 155	cm3/1000 strokes : +- 2.0 Check tolerance
opeca mini	133	= cm3/1000s. : + 5.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 06.12.95 Test oil : ISO 4113

Combination No. : 0 402 046 877

Injection pump

Pump designation : PES6P120A320RS3337

: -1

EP type number : 0 412 026 772

Governor

Governer design. : RQV300...1250PA1149

: -2K

Governer no. : 0 421 815 504

Cust. part No. : CCEP 5158 66-218

Customer-spec. information

Customer : RVI

Motor : MIDR 06-02-26 V4

Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.15

Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 13.00

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.60

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 150.5

Tolerance cm3/1000 strokes	: + 1.0	<u> </u>
		+ GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: +- 4.0	Rated speed rpm : 1395
Spreed Tolerance cm3/1000 strokes	: 5.0	Rack travel in mm: 11.60 Tolerance mm: + 1.30
Check tolerance cm3/1000s.	: 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm : 1250 Aneroid pressure hPa : 1000
Rack travel in mo Tolerance mm Del. quantity		Del. quantity + cm3/1000 strokes : 150.5 + Tolerance
cm3/1000 strokes Tolerance	: 26.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
cm3/1000 strokes Check tolerance		cm3/1000s. : + 4.0 Spreed
cm3/1000s. Spreed Tolerance	: +- 5.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance		cm3/1000s. : 9.0
cm3/1000s.	: 12.0	
(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP	control Lever position degree : 293.0
GUIDE SLEEVE TRAV	/EL	tolerance degree : + 4.0 RATED SPEED
Rated speed rpm guide sleeve travel mm	: 1.31	rack travel mm : -1.00 Rated speed rpm : 1296
Tolerance mm	: +- 0.20	Tolerance 1/min : + 5 rack travel mm : -8.60
Rated speed rpm guide sleeve travel mm	: 1311 : 9.80	rack travel mm : -8.60 Rated speed rpm : 1426 Tolerance 1/min : +- 15
Tolerance mm	: +- 0.15	rack travel mm : -12.10
Rated speed rpm guide sleeve travel mm	: 868 : 5.97	Tolerance mm : + 0.50 Rated speed rpm : 1550
Tolerance mm	: + 0.25	
Rated speed rpm guide sleeve	: 510	+ LOW IDLE
travel mm Tolerance mm	: 3.59 : +- 0.25	t control lever control lever 241.0
Rated speed rpm guide sleeve	: 1600	tolerance degree : + 4.0
travel mm Tolerance mm	: 13.50 : +- 0.50	+ Testing: +

Rated speed rpm rack travel mm Tolerance mm	: 300 : -8.30 : +- 0.10	Check speed 1/min : < 245
Rated speed rpm	: 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: < -6 .67	Aneroid pressure hPa : 1000
Rated speed rpm	: 400	Rated speed rpm : 850 Del. quantity
TORQUE CONTROL		cm3/1000 strokes : 126.0 Tolerance
Rated speed rpm	: 1250	cm3/1000 strokes : + 3.0 Check tolerance + cm3/1000s. : + 6.0
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: −1.85 : + 0.15 : 350 : −2.70	Aneroid pressure hPa : - Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 124.5 Tolerance cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		Check tolerance cm3/1000s. : + 4.0
SETTING		BREAKAWAY
Rated speed rpm Pressure hPa rack travel mm MEASUREMENT	: 1000	Rack travel in mm: -1.00 Rated speed rpm: 1296 Tolerance 1/min: +- 5
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: -2.45 : +- 0.20	STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 108.0 Tolerance cm3/1000 strokes : +- 15.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 160 : -2.15 : + 0.10 : 280	Check tolerance cm3/1000s. : +- 19.0
rack travel mm Tolerance mm	: -1.20 : +- 0.05	LOW IDLE
START CUT-OUT	: > 100	Rated speed rpm : 300 rack travel mm : -8.30 Tolerance mm : +- 0.20 Del. quantity
Rated speed rpm Rated speed rpm		- cm3/1000 strokes : 26.0 - Tolerance
Check speed 1/min	: > 80	cm3/1000 strokes : + 2.0 Check tolerance
alega comer		+ cm3/1000s. : +- 5.0

Spreed Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.10.95 Test oil : ISO 4113

Combination No. : 0 402 076 762

Injection pump

Pump designation : PES6P12DA72ORS3322 EP type number : 0 412 026 764

Governor

Governer design. : RSV650...1250P8A567

: -1

Governer no. : 0 421 833 422

Cust. part No. :

Customer-spec. information

Customer : FNH-GEOTECH

Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 105 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Check

tolerance °NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 10.70 Tolerance mm: + 0.05	- Check tolerance - cm3/1000s. : +- 4.0 - Spreed - Tolerance
Del. quantity cm3/1000 strokes : 137.5	cm3/1000 strokes : 5.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	- cm3/1000s. ; 9.0 -
Check tolerance cm3/1000s. : + 4.0	CONTROL LEVER
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 111.0 tolerance degree : + 4.0 RATED SPEED
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1330
Del. quantity cm3/1000 strokes : 21.0	ASSEMBLY GOVERNOR SETTING
Tolerance cm3/1000 strokes : +- 3.0	Rated speed rpm : 1293 rack travel mm : 9.65
Check tolerance cm3/1000s. : + 6.0 Spreed	Rated speed rpm : 1325 Tolerance 1/min : + 5
Tolerance + 8.0 + Check tolerance + Check tolera	rack travel mm : 4.00 rack travel mm : 0.85
cm3/1000s. : 12.0	Tolerance mm : + 0.55 Rated speed rpm : 1500
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1294 rack travel mm : 9.65
<u> </u>	Rated speed rpm : 1326 Tolerance 1/min : +- 5
GUIDE SLEEVE POSITION	rack travel mm : 4.00
Rated speed rpm : 800	rack travel mm : 0.85 Tolerance mm : +- 0.55
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Rated speed rpm : 1295 rack travel mm : 9.65
governor spring pre-tension click setting x : 3.50	Rated speed rpm : 1327 Tolerance 1/min : +- 5 rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85 Tolerance mm : + 0.55
Rated speed rpm : 1250 Aneroid pressure hPa : 1500	Rated speed rpm : 1296 rack travel mm : 9.65
Del. quantity + cm3/1000 strokes : 137.5 +	Rated speed rpm : 1328
Tolerance cm3/1000 strokes : +- 1.0	Tolerance 1/min : +- 5 rack travel mm : 4.00

rack travel mm Tolerance mm Rated speed rpm rack travel mm	: +- 0.55 : 1297	Rated speed rpm : 700 rack travel mm : 11.10 Tolerance mm : + 0.10
Rated speed rpm Tolerance 1/min rack travel mm	; 5	ANEROID/ALTITUDE COMPENSATOR TEST
rack travel mm Tolerance mm	: 0.85 : + 0.55	SETTING
Rated speed rpm rack travel mm		Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 11.10 Tolerance mm : + 0.10
Rated speed rpm Tolerance 1/min rack travel mm	: 	MEASUREMENT
rack travel mm Tolerance mm		Pressure hPa : - Rated speed rpm : 500 rack travel mm : 7.70 Tolerance mm : + 0.10
LOW IDLE		Rated speed rpm : 500
control lever position degree tolerance degree		Pressure hPa : 630 rack travel mm : 10.75 Tolerance mm : + 0.05
	· ·	T
Setting point w/o	ut bumper spring	START CUT-OUT
Setting point w/o Rated speed rpm rack travel mm	: 650	Rated speed rpm : > 100
Rated speed rpm	: 650	+
Rated speed rpm rack travel mm	: 650 : 4.10 : 650 : 4.60	Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Testing: Rated speed rpm rack travel mm	: 650 : 4.10 : 650 : 4.60 : + 0.10 : 2.00 : 750	Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 150.5
Rated speed rpm rack travel mm Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm	: 650 : 4.10 : 650 : 4.60 : + 0.10 : 2.00 : 750	Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 150.5 Tolerance cm3/1000 strokes : + 3.0
Rated speed rpm rack travel mm Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm Tolerance 1/min	: 650 : 4.10 : 650 : 4.60 : + 0.10 : 2.00 : 750 : + 50	Rated speed rpm : > 100 Check
Rated speed rpm rack travel mm Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm Tolerance 1/min TORQUE CONTROL Rated speed rpm rack travel mm	: 650 : 4.10 : 650 : 4.60 : + 0.10 : 2.00 : 750 : + 50 : 10.70 : + 0.05 : 900	Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 150.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
Rated speed rpm rack travel mm Testing: Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm Tolerance 1/min TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 650 : 4.10 : 650 : 4.60 : + 0.10 : 2.00 : 750 : + 50 : 10.70 : + 0.05 : 900 : 11.10 : + 0.10 : 1100 : 10.95	Rated speed rpm : > 100 Check speed 1/min : > 80 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 150.5 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity

STARTING FUEL DELIVERY

Del. quantity cm3/1000 strokes : 210.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Del. quantity

cm3/1000 strokes : 21.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s.6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.95 Test oil : ISO 4113

Combination No. : 0 402 646 604

Injection pump

Pump designation : PE6P120A720RS7188

: -10

EP type number : 0 412 626 924

Gavernor

Governer design. : RQV350...1050PA795

: -13

Governer no. : 0 421 814 017

Cust. part No. : 1337549

Customer—spec. information Customer : SCANIA

Motor : DS11 Allvary

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05
Check

tolerance mm : ← 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.35
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 236.0

·----

Tolerance cm3/1000 strokes	: + 1.0	<u> </u>	
		CONTROL LEVER	
Check tolerance cm3/1000s.	: +- 4.0	t control lever position degree	: 45.0
Spreed Tolerance cm3/1000 strokes	: 8.0	tolerance degree	
Check tolerance		position degree tolerance degree	
cm3/1000s.	12.0	RATED SPEED	
Rated speed rpm	: 3,50	+ rack travel mm	: 12.30
Rack travel in mm Tolerance mm Del. quantity	4.70 : +- 0.30	Rated speed rpm Tolerance 1/min	
cm3/1000 strokes Tolerance cm3/1000 strokes		rack travel mm Rated speed rpm Tolerance 1/min	
Check tolerance		+	
cm3/1000s. Spreed Tolerance	: +- 6.0	rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1350
cm3/1000 strokes Check tolerance		‡	
cm3/1000s.	: 8.0	LOW IDLE	
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	control lever position degree tolerance degree	
GUIDE SLEEVE POSI	TION	control lever	
Rated speed rpm	: 1280	+ position degree + tolerance degree	
Rack travel in mm Tolerance mm	: 12.00 : +- 1.00	Testing:	
	Y AT FULL LOAD STOP	Rated speed rpm rack travel mm Tolerance mm	: 4.70
Rated speed rpm		Rated speed rpm	: 250
Aneroid pressure		CRT mm min.	: > 8.00
Del. quantity	. 27/ 0	+	
cm3/1000 strokes Tolerance		+ Rated speed rpm	: 300
cm3/1000 strokes Check tolerance		TORQUE CONTROL	
cm3/1000S. Spreed Tolerance	: +- 4.0	Rated speed rpm rack travel mm	: 700 : 13.35
cm3/1000 strokes Check tolerance	: 8.0	Tolerance mm	: + 0.05
cm3/1000s.	: 12.0	Rated speed rpm rack travel mm	: 1050 : 13.35

ANEROID/ALTITUDE COMPENSATOR TEST	: +- 0.05	 	Rack travel in mm Rated speed rpm Tolerance 1/min	: 1095
COM CHORTON 1201		+		
SETTING		<u>†</u>	STARTING FUEL DEL	IVERY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.35 : + 0.05	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 100 : 10.40 : + 0.20 : 170.0
MEASUREMENT		+	Tolerance cm3/1000 strokes	: +- 20.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.40 : +- 0.20	T + +	Check tolerance cm3/1000s.	: +- 24.0
Rated speed rpm	: 500	‡		
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 440 : 12.05 : + 0.05 : 270 : 11.00 : + 0.15	+++++++++++++++++++++++++++++++++++++++	Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 4.70 : + 0.30 : 19.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	RACTERISTICS : - : 1050		Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 6.0
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 215.0 : + 4.0	+ + + + + + + + + + + + + + + + + + + +		
cm3/1000s.	: +- 6.0	Į	End of test speci	fication sheet
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 153.0 : + 1.0 : + 4.0	+++++++++++++++++++++++++++++++++++++++		
BREAKAWAY		Ŧ		

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 08.12.95 Test oil : ISO 4113

Combination No. : 0 402 646 608

Injection pump

Pump designation : PE6P120A720RS7188

: -10J

EP type number : 0 412 626 926

Governor

Governer design. : RQ200/950PA745-3

Governer no. : 0 421 801 579

Cust. part No. : 1344920

Customer-spec. information

Customer : SCANIA : DSC 11 71 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 417 413 025

2.5 Inlet press. bar :

Tolerance bar : +- 0.1

Overflow quantity

min. L/h Tolerance 1/h : +- 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 4.45 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.30

Check

: **←** 0.50 tolerance *NW

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm	: 700 +	Rated speed rpm : 355 guide sleeve
Rack travel in m Tolerance mm	n: 10.75 + 0.05	travel mm : 2.97 Tolerance mm : +- 0.10
Del. quantity	457.0	Rated speed rpm : 520 guide sleeve
cm3/1000 strokes Tolerance	: 157.0	travel mm : 4.50 Tolerance mm : + 0.10
cm3/1000 strokes	: + 1.0	Rated speed rpm : 1045 guide sleeve
Check tolerance cm3/1000s.	: + 4.0	travel mm : 5.50 Tolerance mm : + 0.10
Spreed Tolerance		Rated speed rpm : 1360 guide sleeve
cm3/1000 strokes Check tolerance	: 8.0	travel mm : 11.50 Tolerance mm : + 0.50
cm3/1000s.	: 12.0	GUIDE SLEEVE POSITION
Rated speed rpm Rack travel in mm	+	Rated speed rpm : 600
Tolerance mm Del. quantity cm3/1000 strokes	: + 0.30 : 16.0	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Tolerance cm3/1000 strokes	+	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/100DS. Spreed	: + 6.0	Rated speed rpm : 700 Aneroid pressure
Tolerance cm3/1000 strokes	: 4.0	hPa : - Del. quantity
Check tolerance cm3/1000s.	: 8.0	cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : + 1.0
(B) SETTING OF IN	JECTION PUMP	Check tolerance cm3/1000s. : +- 4.0
WITH GOVERNOR		Spreed Tolerance cm3/1000 strokes : 8.0
GUIDE SLEEVE TRAV	+	Check tolerance cm3/1000s. : 12.0
Rated speed rpm guide sleeve travel mm	: 250 : 1.41	
Tolerance mm	: + 0.20	CONTROL LEVER
Rated speed rpm guide sleeve travel mm	: 1006	<pre>control lever position degree : 41.0 tolerance degree : + 4.0</pre>
Tolerance mm	: + 0.15	control lever
Rated speed rpm guide sleeve travel mm	; 930 : 4.50	position degree : 95.0 tolerance degree : +- 4.0
Tolerance mm	: + 0.10	RATED SPEED

rack travel mm 9.70 Del. quantity Rated speed rpm 995 cm3/1000 strokes : 158.0 : ← 5 Tolerance 1/min Tolerance cm3/1000 strokes : +- 4.0rack travel mm 4.00 Check tolerance Rated speed rpm cm3/1000s.: +- 6.0 1100 Tolerance 1/min : +rack travel mm : 0.50 : ← 0.50 BREAKAWAY Tolerance mm Rated speed rpm : 1250 Rack travel in mm : 9.70 Rated speed rpm : Tolerance 1/min : +-LOW IDLE STARTING FUEL DELIVERY control lever position degree : 62.0 tolerance degree : +-4.0 Rated speed rpm 100 rack travel mm : 10.75 control lever Tolerance mm : **←** 0.05 position degree 7.0 Del. quantity tolerance degree : +cm3/1000 strokes : 170.0 4.0 Tolerance cm3/1000 strokes : + 20.0Testing: Check tolerance cm3/1000s. : + 24.0250 Rated speed rpm : rack travel mm 4.70 Tolerance mm : + 0.102.00 rack travel mm LOW IDLE Rated speed rpm 340 20 Tolerance 1/min Rated speed rpm 250 : 4.70 rack travel mm Rated speed rpm : 150 0.30 Tolerance mm : > 6.00 CRT mm min. Del. quantity cm3/1000 strokes : 16.0 Tolerance TORQUE CONTROL cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. : +-6.0 700 Rated speed rom : 10.75 Spreed rack travel mm : +- 0.05 Tolerance Tolerance mm cm3/1000 strokes : 4.0 950 Check tolerance Rated speed rpm : cm3/1000s. 8.0 10.75 rack travel mm Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS End of test specification sheet

hPa

Aneroid pressure

Rated speed rpm :

950

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12,12,95 Test oil : ISO 4113

Combination No. : 0 402 646 657

Injection pump

Pump designation : PE6P130A320RS7368 EP type number : 0 412 636 836

Governor

Governer design. : RQV250...1125PA1210K

Governer no. : 0 421 815 460

Cust. part No. : 866737-P04 v. 11/95

Customer-spec. information Customer : PENTA

: TAMD 122 P Motor

Power KW : 426.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper (RoBo diaphragm) : 4.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 077

2.5 Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 7.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1125

Rack travel in mm: 11.40 Tolerance mm : \leftarrow 0.05

Del. quantity	+	guide sleeve
cm3/1000 strokes :	313.0	travel mm : 2.73
	<u> </u>	Tolerance mm : + 0.25
Tolerance	+	
cm3/1000 strokes :	+ 1.5 +	Rated speed rpm : 430
		guide sleeve
Check tolerance	+	travel mm : 3.61
cm3/1000s. :	+ 5.0 +	Tolerance mm : + 0.25
Spreed	†	Rated speed rpm : 1420
Tolerance	+	guide sleeve
cm3/1000 strokes :	9.0	travel mm : 13.50
	 †	Tolerance mm : + 0.50
Check tolerance	47.0	
cm3/1000s. :	13.0	OUTDE OF PERSON
	7.0	GUIDE SLEEVE POSITION
Rated speed rpm :	260 +	0.1.1
Book Assessed to see	, 70	Rated speed rpm : 1284
Rack travel in mm :	4.70	Deal Annual in the Annual An EO
	+ 0.20 +	Rack travel in mm: 10.50
Del. quantity	20.0	Tolerance mm : +- 2.00
cm3/1000 strokes :	20.0	
Tolerance	. 70	FULL LOAD DELIVEDY AT FULL LOAD CTOD
cm3/1000 strokes :	+ 3.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		Dated aread are a 1125
cm3/1000s. :	+ 6.0	Rated speed rpm : 1125
Spreed	Ť	Aneroid pressure hPa : 2000
Tolerance	7.0	
cm3/1000 strokes :	7.0	Del. quantity cm3/1000 strokes : 313.0
Check tolerance	11.0	
cm3/1000s. :	11.0	Tolerance cm3/1000 strokes : +- 1.5
	Ť	
(D) CETTING OF THE	CTTON OWN	Check tolerance cm3/1000s. : +- 5.0
(B) SETTING OF INJEC	CITON PUMP	
WITH GOVERNOR	Ť	Spreed Tolerance
	T	cm3/1000 strokes : 9.0
GUIDE SLEEVE TRAVEL	<u>I</u>	Check tolerance
GOIDE STEENE INMAET	I	cm3/1000s. : 13.0
Rated speed rpm :	260	(1857 10003. 15.0
guide sleeve	I	
travel mm :	1.69	
	+ 0.25	CONTROL LEVER
roterance man	1	OOM WOE FEACH
Rated speed rpm :	1176	control lever
guide sleeve	1110	position degree : 64.0
travel mm :	10.15	tolerance degree : + 4.0
	+ 0.25	totel alloc degree
10001 01100 11111	1	control lever
Rated speed rpm :	782	position degree : 118.0
guide sleeve	1	tolerance degree : +- 4.0
travel mm :	6.36	
	+ 0.25	RATED SPEED
	4	
Rated speed rpm :	275	rack travel mm : 10.40
guide sleeve	1	Rated speed rpm : 1165
travel mm :	2.04	Tolerance 1/min : + 5
	+- 0.25	
	1	rack travel mm : 4.00
Rated speed rpm :	325	Rated speed rpm : 1246
-	•	

Tolerance 1/min	: +- 15	1	Pressure hPa Rated speed rpm	: – 500
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50	‡	rack travel mm Tolerance mm	: 7.15 : + 0.20
rated speed (pill	. 1300	\pm	Rated speed rpm	: 1125
LOW IDLE			Pressure hPa rack travel mm Tolerance mm	
control lever position degree tolerance degree		<u> </u>	Pressure hPa rack travel mm Tolerance mm	: 0.25
control lever position degree tolerance degree	: 18.0 : + 4.0	+		
Testing:		‡	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm rack travel mm Tolerance mm			Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm	: 200	Ŧ	Tolerance cm3/1000 strokes	
CRT mm min.	: > 5.90	Ŧ	Check tolerance cm3/1000s.	
Rated speed rpm	: 330	†	Spreed Tolerance	. — 0.0
TORQUE CONTROL			cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 11.40	‡	cm3/1000s. Aneroid pressure hPa	: 2000
Rated speed rpm rack travel mm Tolerance mm	: 10.55	† † †	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 290.0
Rated speed rpm rack travel mm Tolerance mm		† † †	cm3/1000 strokes Check tolerance cm3/1000s.	: + 6.0
ANEROID/ALTITUDE COMPENSATOR TEST		-	hPa Rated speed rpm Del. quantity	
SETTING		† † ‡	cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	
Rated speed rpm Pressure hPa rack travel mm	: 2000 : 11.40	 	cm3/1000s.	: +- 5.0
Tolerance mm	: +- 0.05	‡	BREAKAWAY	
MEASUREMENT		‡	Rack travel in mm	: 10.40

Rated speed rpm : 1165
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 7.15
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 80.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s : + 20.0

LOW IDLE

Rated speed rpm : 260 rack travel mm : 4.70 Tolerance mm : +- 0.20 Del. quantity 20.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 7.0 Check tolerance 11.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.09.95 Edition Test oil : ISO 4113

Combination No. : 0 402 698 806

Injection pump

Pump designation : PE8P120A720LS7331

: -10

EP type number : 0 412 628 896

Governor

Governer design. : RE30

Governer no. : 0 421 890 022

Cust. part No. : 1362097

Customer-spec. information Customer : SCANIA

: DSC1409, DSC1416 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar Tolerance bar ; +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0 x inside diameter: 2.0

600 x length mm :

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 5.05

Prestroke mm 5.05 : +- 0.05 Tolerance mm Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Rack travel in mm: 10.50 Tolerance mm : +- 1.50 Tolerance mm : +- 1.50

: 1-2-7-3-4 Firing order

: - 5- 6- 8

: 0-45-90-135-180 Phasing

: -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 1

Vibration damper

(RoBo diaphragm) : 3.2

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 VTESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: 0 Setting point (P, R and H pump) Uact V 3,100 CRT mm 13.00 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1.700 Uact V 6.15 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.30tolerance mm Setting point (amua M) 3.100 Uact V 12.50 CRT mm : +/- 0.05 Tolerance mm Check : +/- 0.10tolerance mm Check value (qmuq M) 1.700 Uact V 5.50 CRT mm Tolerance man : +/- 0.25Check tolerance mm : +/- 0.30Stop position : Value with Uact V

deenergised adjusting magnet and control rod in

stop position.
0.75

: +/- 0.25

tolerance mm : +/- 0.35 ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check tolerance V : +/- 1.20 Engine speed min-1: 600 Difference Amplitude to Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 700 Rated speed rpm Uact V 3.000 : Del. quantity cm3/1000 strokes : 248.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 FUEL DELIVERY CHARACTERISTICS 950 Rated speed rpm : Uact V 3.000 Del. quantity cm3/1000 strokes : 224.0 Tolerance cm3/1000 strokes : +-4.0

End of test specification sheet

6.0

Check tolerance cm3/1000s.

CRT mm

Check

Tolerance mm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.12.95 Test oil : ISO 4113

Combination No. : 0 402 736 890

Injection pump

Pump designation : PES6P120A120RS7314

EP type number : 0 412 726 901

Governor

Governer design. : RQV400...1250PA964

: -32K

Governer no. : 0 421 815 486

Cust. part No. : 3282607

Customer-spec. information
Customer : CUMMINS
Motor : 6BTAA
Power KW : 158.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : \div 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.70 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 12.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

Start of delivery blocking

*NW after s.o.d. : 6.50 Tolerance : + 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 14.20	- guide sleeve - travel mm : 3.33
Tolerance mm : + 0.05	Tolerance mm : +- 0.25
D. I	. Dahad amad maa 4700
Del. quantity + cm3/1000 strokes : 149.0 +	Rated speed rpm : 1700 guide sleeve
they took strokes . 147.0	travel mm : 11.50
Tolerance	· Tolerance mm : + 0.50
cm3/1000 strokes : + 1.0 +	•
Check tolerance	GUIDE SLEEVE POSITION
cm3/1000s. : + 4.0	
	Rated speed rpm : 1430
Spreed + Tolerance +	Rack travel in mm: 13.60
cm3/1000 strokes : 5.0	Tolerance mm : + 1.30
Check tolerance	FILL LOAD DELTUEDY AT FULL LOAD OTOD
cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 400	Rated speed rpm : 1250
4	Aneroid pressure
Rack travel in mm: 6.50	hPa : 1500 Del. quantity
Del. quantity	cm3/1000 strokes : 149.0
cm3/1000 strokes : 20.0	Tolerance
Tolerance	cm3/1000 strokes : +- 1.0
cm3/1000 strokes : + 3.0 +	Check tolerance
Check tolerance	cm3/1000s. : + 4.0
cm3/1000s. : +5.0 +5.0	Spreed Tolerance
Tolerance	cm3/1000 strokes : 5.0
cm3/1000 strokes : 7.0	Check tolerance
Check tolerance +	cm3/1000s. : 9.0
cm3/1000s. : 11.0	
T	
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR	control loven
1	control lever position degree : 59.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
†	-
Rated speed rpm : 400	control lever
guide steeve + travel mm : 1.39 +	position degree : 116.0 tolerance degree : +- 4.0
Tolerance mm : + 0.20	toter ande degree : 4.0
 	RATED SPEED
Rated speed rpm : 1314	
guide sleeve + travel mm : 7.65 +	rack travel mm : 13.20 Rated speed rpm : 1295
travel mm : 7.65 + Tolerance mm : + 0.15	Rated speed rpm : 1295 Tolerance 1/min : +- 5
T	TOCOL GIRLO CARALLE 4
Rated speed rpm : 864	rack travel mm : 4.00
guide steeve	Rated speed rpm : 1490
travel mm : 4.76 + Tolerance mm : +- 0.25 +	Tolerance 1/min : +- 15
T CCT GITCE THE	rack travel mm : 0.50
Rated speed rpm : 550 +	Tolerance mm : + 0.50
†	Rated speed rpm : 1550

		+	Rated speed rpm	: 1250
LOW IDLE		‡ ‡	Pressure hPa rack travel mm Tolerance mm	: 480 : 11.80 : + 0.20
control lever position degree tolerance degree	: 72.0 : ← 4.0	† †	Pressure hPa rack travel mm Tolerance mm	: 13.50
control lever position degree tolerance degree	: 15.0 : +- 4.0	‡	START CUT-OUT	
Testing:		+	Rated speed rpm Rated speed rpm	
Rated speed rpm rack travel mm Tolerance mm	: 6.50	Ī	Check speed 1/min Check	: > 250
Rated speed rpm	: 300	‡	speed 1/min	: < 360
CRT mm min.	: > 8.50	‡	FUEL DELIVERY CHAP	RACTERISTICS
Rated speed rpm	: 430	+	Aneroid pressure hPa	: 1500
TORQUE CONTROL		T	Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm rack travel mm	: 14.20	+	Tolerance cm3/1000 strokes	
Tolerance mm Rated speed rpm	: 750	‡	Check tolerance cm3/1000s. Spreed	: + 6.0
rack travel mm Tolerance mm	: 12.75 : + 0.10	‡	Tolerance cm3/1000 strokes	: 12.0
Rated speed rpm rack travel mm	: 12.15	Ŧ	Check tolerance cm3/1000s.	: 16.0
Tolerance mm	: + 0.15	‡	Aneroid pressure hPa Rated speed rpm	: - 500
ANEROID/ALTITUDE COMPENSATOR TEST		‡	Del. quantity cm3/1000 strokes Tolerance	: 75.0
SETTING		+	cm3/1000 strokes Check tolerance	
Rated speed rpm Pressure hPa	: 1250 : 1500	‡	cm3/1000s.	: +- 4.0
rressure nra rack travel mm Tolerance mm	: 14.20 : + 0.05	+	BREAKAWAY	
MEASUREMENT		+	Rack travel in mm	
Pressure hPa Rated speed rpm rack travel mm	: 11.00	† † †	Rated speed rpm Tolerance 1/min	: 1295
Tolerance mm	: +- 0.10	‡	STARTING FUEL DELI	VERY

Rated speed rpm	:	100
Del. quantity cm3/1000 strokes	:	210.0
Tolerance cm3/1000 strokes	: +-	15.0
Check tolerance cm3/1000s.	: +-	19.0

LOW IDLE

Rated speed rpm	:	400
rack travel mm	:	6.50
Tolerance mm	: +-	0.30
Del. quantity		
cm3/1000 strokes	:	20.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		- 0
cm3/1000s.	; +	5.0
Spreed		
Tolerance	_	70
cm3/1000 strokes	:	7.0
Check tolerance	_	44 0
cm3/1000s.	:	11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.12.95 Test oil : ISO 4113

Combination No. : 0 402 746 647

Injection pump

Pump designation : PES6P12OA72ORS7366 EP type number : 0 412 726 933

Governor

Governer design. : RQV275...1100PA1208K

Governer no. : 0 421 815 459

Cust. part No.

Customer-spec. information

Customer : IVECO-FRÂNCE Motor : 8460.41.4000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance *NW : + 0.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.75
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 273.0

Tolerance cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 4.0

+	
Spreed	Rack travel in mm : 10.00
Tolerance	Tolerance mm : + 2.70
cm3/1000 strokes : 5.0	
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 9.0	
1	Rated speed rpm : 1100
Rated speed rpm : 275	Aneroid pressure
nated speed (pin	hPa : 1200
Rack travel in mm: 6.80	Del. quantity
Tolerance mm : + 0.20	cm3/1000 strokes : 273.0
Del. quantity	Tolerance
cm3/1000 strokes : 23.0	cm3/1000 strokes : + 1.0
Tolerance	Check tolerance
cm3/1000 strokes : + 3.0	cm3/1000s. : +- 4.0
Check tolerance	
cm3/1000s. : +- 6.0	Spreed Tolerance
Spreed	
Tolerance +	Check tolerance
cm3/1000 strokes : 8.0	cm3/1000s. : 9.0
Check tolerance +	
cm3/1000s. : 12.0 +	
†	
†	CONTROL LEVER
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	control lever
†	position degree : 117.0
	tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL +	
+	RATED SPEED
Rated speed rpm : 275 +	
guide sleeve +	rack travel mm : 11.70
travel mm : 1.70	Rated speed rpm : 1145
Tolerance mm : +- 0.20	Tolerance 1/min : +- 5
+	
Rated speed rpm : 1155	rack travel mm : 4.00
guide sleeve +	Rated speed rpm : 1260
travel mm : 9.75	Tolerance 1/min : + 15
Tolerance mm : + 0.15	
+	rack travel mm : 0.50
Rated speed rpm : 790	Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1350
travel mm : 6.42	
Tolerance mm : + 0.25	
1	
Rated speed rpm : 460	LOW IDLE
auide sleeve +	
guide sleeve + travel mm : 3.77	
travel mm : 3.77	
	control lever
travel mm : 3.77 Tolerance mm : +- 0.25	control lever position degree : 76.0
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440	control lever
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve	control lever position degree : 76.0 tolerance degree : +- 4.0
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve travel mm : 13.50	control lever position degree : 76.0
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve	control lever position degree : 76.0 tolerance degree : +- 4.0 Testing:
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve travel mm : 13.50	control lever position degree : 76.0 tolerance degree : +- 4.0 Testing: Rated speed rpm : 275
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50	control lever position degree : 76.0 tolerance degree : +- 4.0 Testing: Rated speed rpm : 275 rack travel mm : 6.80
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve travel mm : 13.50	control lever position degree : 76.0 tolerance degree : +- 4.0 Testing: Rated speed rpm : 275
travel mm : 3.77 Tolerance mm : + 0.25 Rated speed rpm : 1440 guide sleeve travel mm : 13.50 Tolerance mm : + 0.50	control lever position degree : 76.0 tolerance degree : +- 4.0 Testing: Rated speed rpm : 275 rack travel mm : 6.80

E20

CRT mm min.	: > 8.30	+ Check + speed 1/min : > 150 + Check
Rated speed rpm	: 335	speed 1/min : < 240
TORQUE CONTROL		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm	: 12.75	Aneroid pressure 1200
Tolerance mm	: + 0.05	Rated speed rpm : 800 - Del. quantity
Rated speed rpm rack travel mm Tolerance mm	: 13.40	Rated speed rpm : 800 Del. quantity cm3/1000 strokes : 290.0 Tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 264.0 Tolerance cm3/1000 strokes : 4.0 Tolerance cm3/1000 strokes : + 6.0 Aneroid pressure hPa : - 6.0 Aneroid pressure hPa : - 6.0 Aneroid pressure hPa : - 6.0 Aneroid pressure hPa : - 6.0 Aneroid pressure hPa : - 6.0 Tolerance cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0
Rated speed rpm rack travel mm	: 650 : 13.10	theck tolerance cm3/1000s. : +- 6.0
Tolerance mm	: ← 0.10	+ Aneroid pressure + hPa : 1200
Rated speed rpm rack travel mm	: 13.10	Rated speed rpm : 500 Del. quantity
Tolerance mm	: +- 0.10	cm3/1000 strokes : 264.0 Tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
COM ENGLION VEGT		Aneroid pressure
SETTING		hPa : - Rated speed rpm : 500
Rated speed rpm Pressure hPa	: 1200	Del. quantity cm3/1000 strokes : 144.0
rack travel mm Tolerance mm	: 13.40 : + 0.05	+ Tolerance + cm3/1000 strokes : + 1.0 + Check tolerance
MEASUREMENT		cm3/1000s. : + 4.0
Pressure hPa Rated speed rpm rack travel mm	800 9.70	BREAKAWAY
Tolerance mm	: +- 0.10	Rack travel in mm: 11.70
Rated speed rpm	: 800	+ Rated speed rpm : 1145 + Tolerance 1/min : +- 5
Pressure hPa rack travel mm Tolerance mm	: 290 : 10.70 : +- 0.20	
Pressure hPa	: 520	T STARTING FUEL DELIVERY
rack travel mm Tolerance mm	: 12.50 : + 0.05	Rated speed rpm : 100 rack travel mm : 12.20 Tolerance mm : + 0.30
START CUT-OUT		Del. quantity cm3/1000 strokes : 120.0 Tolerance
Rated speed rpm Rated speed rpm		cm3/1000 strokes : +- 15.0 Check tolerance
		+ cm3/1000s. : +- 19.0 +

LOW IDLE

Rated speed rpm	:	275	
rack travel mm	:	6.80	
Tolerance mm	: +-	0.20	
Del. quantity			
cm3/1000 strokes	:	23.0	
Tolerance			
cm3/1000 strokes	: +-	3.0	
Check tolerance			
cm3/1000s.	: +-	6.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	8.0	
Check tolerance			
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.12.95 Test oil : ISO 4113

Combination No. : 0 403 444 155

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0 413 404 121

Governor

Governer design. : RQV300...1300MW139

Governer no. : 0 420 083 304

Cust. part No. : 0260748502

Customer-spec. information Customer : MB-NFZ Motor : OM364A Power KW : 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.70
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.15 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes :

cm3/1000 strokes : 90.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed Tolerance

cm3/1000 strokes :

: 3.5

Check tolerance		+	
cm3/1000s.	: 6.0	FULL LOAD DELIVE	RY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm	: 1300
Rack travel in mm Tolerance mm	7.80 : +- 0.10	Aneroid pressure	
Del. quantity cm3/1000 strokes	: 12.0	Del. quantity cm3/1000 strokes	: 90.0
Tolerance cm3/1000 strokes	: +- 2.0	Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.5	Check tolerance cm3/1000s.	: + 3.0
Spreed Tolerance		Spreed Tolerance	
cm3/1000 strokes Check tolerance	•	cm3/1000 strokes Check tolerance	
cm3/1000s.	: 5.5	cm3/1000s.	: 6.0
(B) SETTING OF IN	UECTION PUMP	20117001 1 51170	
WITH GOVERNOR		CONTROL LEVER	
GUIDE SLEEVE TRAV	•	control lever position degree tolerance degree	
Rated speed rpm guide sleeve	: 300 -	RATED SPEED	
travel mm Tölerance mm	: 1.24 : + 0.20	rack travel mm Rated speed rpm	
Rated speed rpm guide sleeve	: 1355	- Tolerance 1/min	
travel mm Tolerance mm	: 10.32 : + 0.15	rack travel mm Rated speed rpm Tolerance 1/min	
Rated speed rpm guide sleeve	: 894	rack travel mm	: 0.50
travel mm Tolerance mm	: 6.18 : ← 0.25	Tolerance mm Rated speed rpm	: +- 0.50
Rated speed rpm guide sleeve	: 510		
travel mm Tolerance mm	: 3.56 : + 0.25	- LOW IDLE	
Rated speed rpm guide sleeve	: 1600	- control lever - position degree	: 76.0
travel mm Tolerance mm	: 13.50 - : + 0.50 -	tolerance degree	
		- Testing:	
GUIDE SLEEVE POSIT	TION -	Rated speed rpmrack travel mm	: 300 : 7.80
Rated speed rpm	: 1430	- Tolerance mm	: + 0.10
Rack travel in mm Tolerance mm		- Rated speed rom	: 200
		- CRT mm min.	: > 9.50

	+ Rated speed rpm : 600
TORQUE CONTROL	+ Del. quantity + cm3/1000 strokes : 78.0 + Tolerance
Rated speed rpm : 1300 rack travel mm : 13.15	cm3/1000 strokes : +- 1.5 Check tolerance
Tolerance mm : + 0.05 Rated speed rpm : 600	cm3/1000s. : +- 4.0 Spreed Tolerance
rack travel mm : 13.40 Tolerance mm : + 0.10	cm3/1000 strokes : 5.0 Check tolerance
Rated speed rpm : 1000 rack travel mm : 13.30	+ cm3/1000s. : 7.0 + Aneroid pressure
Tolerance mm : + 0.10	+ hPa : - Rated speed rpm : 500
ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 49.0 Tolerance
SETTING	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm : 500 Pressure hPa : 700 rack travel mm : 13.40 Tolerance mm : + 0.10	BREAKAWAY
MEASUREMENT	Rack travel in mm: 12.15 Rated speed rpm: 1345 Tolerance 1/min: + 5
Pressure hPa : - Rated speed rpm : 500 Tolerance mm : + 0.05	
Rated speed rpm : 500	STARTING FUEL DELIVERY
Pressure hPa : 230 rack travel mm : 1.00 Tolerance mm : + 0.10	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 90.0 Tolerance
Pressure hPa : 150 rack travel mm : 0.40 Tolerance mm : + 0.10	cm3/1000 strokes : + 5.0 + Check tolerance cm3/1000s. : + 8.0
START CUT-OUT	LOW TOLE
Rated speed rpm : > 100 Rated speed rpm : < 200	LOW IDLE Rated speed rpm : 300
Check speed 1/min : > 80	rack travel mm : 7.80 Tolerance mm : + 0.10 Del. quantity
Check speed 1/min : < 230	cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0
FUEL DELIVERY CHARACTERISTICS	+ Check tolerance + cm3/1000s. : + 4.5 + Spreed
Aneroid pressure hPa : 700	Tolerance : 3.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 13,12,95 : ISO 4113

Combination No.

: 0 403 466 173

Injection pump

Pump designation : PES6MW100/120RS1241

EP type number

: 0 413 406 240

Governor

Governer design.

: RSV400...950MW0A384

: -1

Governer no.

: 0 420 085 285

Cust. part No.

: 3930118

Customer-spec. information : CDC Customer

Motor

: 6 CT

Power KW

: 145.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 1 417 413 047

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

208.5

Tolerance bar

1.5

Test lines

: 1 680 750 014

Outside diameter :

6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +-1.0

Prestroke mm 2.80 : + 0.05Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.50

Barrel no.

BASIC SETTING

Rated speed rpm 950

12.50 Rack travel in mm :

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

147.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : + 4.0	Check tolerance cm3/1000s. : 7.5
Spreed Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance cm3/1000s. : 7.5	position degree : 80.0 tolerance degree : + 4.0
Rated speed rpm : 400	RATED SPEED
Rack travel in mm: 5.80 Tolerance mm: + 0.30 Del. quantity cm3/1000 strokes: 22.0	rack travel mm : 11.50 Rated speed rpm : 995 Tolerance 1/min : + 5
Tolerance cm3/1000 strokes : + 2.0 check tolerance cm3/1000s. : + 4.5	rack travel mm : 4.00 Rated speed rpm : 1080 Tolerance 1/min : + 15
Spreed + Tolerance cm3/1000 strokes : 3.5 +	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1250
Check tolerance cm3/1000S. : 5.5	rack travel mm : 4.00 Rated speed rpm : 1095
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever
Domad chard nom + 900	position degree : 68.0
Rated speed rpm : 800	tolerance degree : + 4.0
Rated speed rpm : 800 Rack travel in mm : 0.65 Tolerance mm : + 0.35	tolerance degree : + 4.0 Setting point w/out bumper spring
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring	tolerance degree : + 4.0
Rack travel in mm: 0.65 Tolerance mm: + 0.35	tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 400
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring pre-tension	tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.30
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring pre-tension click setting x: 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 950 Aneroid pressure	tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.30 Testing: Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : + 0.30 rack travel mm : 2.00
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring pre-tension click setting x: 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 950 Aneroid pressure hPa: 1200 Del. quantity	tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.30 Testing: Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : + 0.30
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring pre-tension click setting x: 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 950 Aneroid pressure hPa: 1200 Del. quantity cm3/1000 strokes: 147.0 Tolerance	tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.30 Testing: Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : + 0.30 rack travel mm : 2.00 Rated speed rpm : 505
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring pre-tension click setting x: 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 950 Aneroid pressure hPa: 1200 Del. quantity cm3/1000 strokes: 147.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s.: + 4.0	tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.30 Testing: Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : + 0.30 rack travel mm : 2.00 Rated speed rpm : 505 Tolerance 1/min : + 35
Rack travel in mm: 0.65 Tolerance mm: + 0.35 governor spring pre-tension click setting x: 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 950 Aneroid pressure hPa: 1200 Del. quantity cm3/1000 strokes: 147.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance	tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 400 rack travel mm : 5.30 Testing: Rated speed rpm : 400 rack travel mm : 5.80 Tolerance mm : + 0.30 rack travel mm : 2.00 Rated speed rpm : 505 Tolerance 1/min : + 35 Rated speed rpm : 100

rack travel mm Tolerance mm	: 12.50 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 12.50 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.25 : + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 850 : 11.70 : + 0.20
Pressure hPa reck travel mm Tolerance mm	: 680 : 10.75 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	:
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 118.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
BREAKAWAY Rack travel in mm Rated speed rpm Folerance 1/min	

100

rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 170.0 Tolerance cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 13.0

LOW IDLE

Rated speed rpm : 400 rack travel mm 5.80 Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : -2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. 5.5

End of test specification sheet

F01

Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.95 Test oil : ISO 4113

Combination No. : 0 400 846 185

Injection pump

Pump designation : PES6A80D410RS2085Y EP type number : 0 410 886 044

Governor

Governer design. : RQV300...1475AB533DL

Governer no. : 0 420 214 069

Cust part No. :

Customer-spec. information
Customer : MB-NFZ

Motor : 0M 352

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

Donder process

x length mm : 600 REMARKS (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : +- 1.0 Prestroke mm : 2.20 : + 0.05Tolerance mm Check : +- 0.10 tolerance mm Rack travel in mm : 10.50

Firing order : 1-5-3-6-2-

Tolerance mm : + 1.50

Phasing : 0-60-120-180-240 : -300

BASIC SETTING

Rated speed rpm : 1450

Rack travel in mm : 8.25
Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 46.5

Tolerance cm3/1000 strokes : ← 0.5

Check tolerance cm3/1000s. : + 2.0

Spreed Tolerance

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. : 4.0

Rated speed rpm : 300

F02

	+ Aneroid pressure
Rack travel in mm : 7.00	+ hPa : -
Tolerance mm : +- 0.10	+ Del. quantity
Del. quantity	+ cm3/1000 strokes : 46.5
cm3/1000 strokes : 14.5	+ Tolerance
Tolerance	+ cm3/1000 strokes : + 0.5
cm3/1000 strokes : +- 1.5 Check tolerance	+ Check tolerance + cm3/1000s. : +- 2.0
cm3/1000s. : +- 3.5	+ Spreed
Spreed	Tolerance
Tolerance	+ cm3/1000 strokes : 2.5
cm3/1000 strokes : 4.0	+ Check tolerance
Check tolerance	+ cm3/1000s. : 4.0
cm3/1000s. : 6.0	†
	†
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR	T CONTROL LEVER
Hatti Gotaliitoli	- control lever
	position degree : 114.0
GUIDE SLEEVE TRAVEL	tolerance degree : + 4.0
	+
Rated speed rpm : 300	+ RATED SPEED
guide sleeve travel mm : 1.04	t + rack travel mm : 7.20
travel mm : 1.04 Tolerance mm : + 0.20	+ Rated speed rpm : 1510
Toterance min . +- 0.20	Tolerance 1/min : +- 5
Rated speed rpm : 1516	Tocerance training
guide steeve	rack travel mm : 4.00
travel mm : 8.76	Rated speed rpm : 1575
Tolerance mm : + 0.15	Tolerance 1/min : +- 15
	+
Rated speed rpm : 997	rack travel mm : 0.50
guide sleeve	Toterance mm : +- 0.50
travel mm : 5.19 Tolerance mm : + 0.25	Rated speed rpm : 1700
roterance will . + 0.25	I
Rated speed rpm : 590	
guide steeve	LOW IDLE
travel mm : 3.20	+
Tolerance mm : + 0.25	†
Bahad annud an - 4700	control lever
Rated speed rpm : 1790	position degree : 69.0
guide sleeve travel mm : 11.50	tolerance degree : +- 4.0
Tolerance mm : + 0.50	Testing:
Total differential	+ cocking.
	Rated speed rpm : 300
GUIDE SLEEVE POSITION -	rack travel mm : 7.00 Tolerance mm : +- 0.10
•	Tolerance mm : +- 0.10
Rated speed rpm : 1420	1
Best August Same At FO	Rated speed rpm : 100
Rack travel in mm: 16.50	t + CRT mm min. :> 8.20
Tolerance mm : +- 1.30	CITE HARI HEITI. : / O.CU
	Rated speed rpm : 440
FULL LOAD DELIVERY AT FULL LOAD STOP	Transaction of the transaction o
-	
Rated speed rpm : 1450 -	TORQUE CONTROL
	∔

Rated speed rpm rack travel mm Tolerance mm	: 1450 : 8.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 9.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 9.00 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 8.35 : + 0.15
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 220
Check speed 1/min Check	: > 80
speed 1/min	: < 240
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm	: 100 : 13.10 : + 0.20
Del. quantity cm3/1000 strokes	: 76.5
Tolerance cm3/1000 strokes	: ← 7.5
Check tolerance cm3/1000s.	: + 10.0
LOW IDLE	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 7.00 : ← 0.10

Del. quantity		
cm3/1000 strokes	:	14.5
Tolerance		
cm3/1000 strokes	: +-	1.5
Check tolerance		
cm3/1000s.	: +-	3.5
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000s.	:	6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 14.12.95 Edition Test oil : ISO 4113

Combination No. : 0 401 876 777

Injection pump

Pump designation : PE6P120A320RS3261 EP type number : 0 411 826 796

Governor

Governer design. : RSV250...1100P0A374

: -11

: D 421 833 346 Governer no.

Cust. part No. : 864451 PO4 v. 6/95

Customer-spec, information : PENTA Customer

: TAMD 102 A Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Vibration

damper

(RoBo diaphragm) : 4.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Test nozzie holde

: 1 688 901 019 assembly

Opening pressure

208.5 bar

Tolerance bar : +- 1.5 Test Lines : 1 680 750 067

Outside diameter : 6.0

x inside diameter: 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

3.45 Prestroke mm Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

: +- 0.50 tolerance *NW

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : + - 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.15 Tolerance mm : + 0.05

+	Check tolerance
Del. quantity + cm3/1000 strokes : 260.0	cm3/1000S. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000 strokes : 5.0 Check tolerance
Check tolerance + 4.0 +	cm3/1000s. : 9.0
	CONTROL LEVED
Spreed + Tolerance +	CONTROL LEVER
cm3/1000 strokes : 5.0	control lever
+	position degree : 44.0
Check tolerance +	tolerance degree : +- 4.0
cm3/1000s. : 9.0 +	control loven
Rated speed rpm : 250	control lever position degree : 94.0
Adrea speed (pii) : 250	tolerance degree : +- 4.0
Rack travel in mm: 6.50	1.0
Tolerance mm : +- 0.20	RATED SPEED
Del. quantity	
cm3/1000 strokes : 23.0 +	rack travel mm : 11.10
Tolerance + 3.0 +	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Check tolerance	Toterance Minn : +- 3
cm3/1000s. : +- 6.0 +	rack travel mm : 4.00
Spreed	Rated speed rpm : 1210
Tolerance	Tolerance 1/min : + 15
cm3/1000 strokes : 5.0 +	
Check tolerance	rack travel mm : 0.85
cm3/1000s. : 7.0	Tolerance mm : +- 0.55 Rated speed rpm : 1350
I	Rated speed (pill : 1330
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 1220
†	
GUIDE SLEEVE POSITION	LOW IDLE
Rated speed rpm : 800	
Rated speed rpm : 800	control lever
Rack travel in mm: 0.50	position degree : 69.0
Tolerance mm : + 0.20	tolerance degree : + 4.0
. +	
governor spring +	control lever
pre-tension + click setting x : 2.25 +	position degree : 19.0 tolerance degree : +- 4.0
click setting x : 2.25	toterance degree : +- 4.0
	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	
<u></u>	Rated speed rpm : 250
Rated speed rpm : 700	rack travel mm : 6.00
Aneroid pressure + hPa : 1500 +	Testing:
hPa : 1500 + Del. quantity +	restrig.
cm3/1000 strokes : 260.0	Rated speed rpm : 250
Tolerance +	rack travel mm : 6.50
cm3/1000 strokes : +- 1.0 +	Tolerance mm : + 0.10

F06

rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 395 : + 30
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.15 : ← 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 8.10 + 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 900 : 3.60 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 140 : 0.25 : ← 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm Del. quantity	700
cm3/1000 strokes Tolerance	: 140.0
cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s.	: +- 4.0

Rack travel in mm : 11.10
Rated speed rpm : 1145
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 17.00 Tolerance mm : + 1.00

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: +	250 6.50 0.20
Del. quantity cm3/1000 strokes		23.0
Tolerance	•	25.0
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000S.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	5.0
Check tolerance		
cm3/1000s.	:	7.0

End of test specification sheet

BREAKAWAY

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 14.12.95 Edition Test oil : 14.12.95 Combination No. : 0 401 876 810 Injection pump Pump designation : PE6P120A320RS3359 EP type number : 0 411 826 815 Governor Governer design. : RSV325...1200P1A615 Governer no. : 0 421 833 503

Cust. part No. : 3825515 PO2 v. 10/95

Customer-spec. information Customer : PENTA Motor : TD 730ME Power KW : 150.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +--2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x Length man : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.35
Tolerance mm : + 0.05

Check

tolerance mm: + 0.10

Rack travel in mm : 9.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.50

Check

: +- 0.75 tolerance *NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 11.00 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 123.0

F08

	Tolerance
Tolerance	cm3/1000 strokes : 7.0
cm3/1000 strokes : +- 1.0 +	Check tolerance
	cm3/1000s. : 11.0
Check tolerance +	
cm3/1000s. : +- 4.0 +	
<u> </u>	
Spreed	CONTROL LEVER
Tolerance +	
cm3/1000 strokes : 7.0	control lever
	position degree : 70.0
Check tolerance +	tolerance degree : +- 4.0
cm3/1000s. : 11.0 +	
+	control lever
Rated speed rpm : 325 +	position degree : 120.0
+	tolerance degree : +- 4.0
Rack travel in mm: 4.60	
Tolerance mm : + 0.20 +	RATED SPEED
Del. quantity +	
cm3/1000 strokes : 25.0 +	rack travel mm : 10.00
Tolerance +	Rated speed rpm : 1235
cm3/1000 strokes : + 2.5 +	Tolerance 1/min : +- 5
Check tolerance +	
cm3/1000s. : + 5.0 +	rack travel mm : 4.00
Spreed +	Rated speed rpm : 1280
Tolerance	Tolerance 1/min : +- 15
cm3/1000 strokes : 3.0 +	
Check tolerance +	rack travel mm : 0.85
cm3/1000s. : 6.0 +	Tolerance mm : + 0.55
+	Rated speed rpm : 1400
· · · · · · · · · · · · · · · · · · ·	The second secon
+	The second secon
(B) SETTING OF INJECTION PUMP	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	LOW IDLE
WITH GOVERNOR	LOW IDLE
	LOW IDLE
GUIDE SLEEVE POSITION	LOW IDLE control lever position degree : 80.0
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION Rated speed rpm : 800	LOW IDLE control lever position degree : 80.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50	LOW IDLE control lever position degree : 80.0 tolerance degree : + 4.0 control lever
GUIDE SLEEVE POSITION Rated speed rpm : 800	LOW IDLE control lever position degree : 80.0 tolerance degree : +- 4.0 control lever position degree : 30.0
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	LOW IDLE control lever position degree : 80.0 tolerance degree : +- 4.0 control lever
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 80.0 tolerance degree : +- 4.0 control lever position degree : 30.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	LOW IDLE control lever position degree : 80.0 tolerance degree : +- 4.0 control lever position degree : 30.0
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing:
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 4.60
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 123.0	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 123.0 Tolerance	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10 rack travel mm : 2.00
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 123.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 123.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10 rack travel mm : 2.00
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 123.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.75 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 123.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 80.0 tolerance degree : + 4.0 control lever position degree : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 4.10 Testing: Rated speed rpm : 325 rack travel mm : 4.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 390

TORQUE CONTROL Rated speed rpm 1200 11.00 rack travel mm : **←** 0.05 Tolerance mm 700 Rated speed rpm 11.00 rack travel mm Tolerance mm : + 0.10ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1500 11.00 rack travel mm Tolerance mm : +- 0.05 **MEASUREMENT** Pressure hPa Rated speed rpm 500 rack travel mm 9.60 Tolerance mm 0.10 500 Rated speed rpm 490 Pressure hPa 1.10 rack travel mm : + 0.15 Tolerance mm 290 Pressure hPa 0.25 rack travel mm : +- 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1500 hPa 700 Rated speed rpm Del. quantity cm3/1000 strokes 136.0 Tolerance 3.0 cm3/1000 strokes Check tolerance cm3/1000s. 6.0 Spreed Tolerance 7.0

Aneroid pressure hPa Rated speed rpm	:	- 500
Del. quantity cm3/1000 strokes	:	95.0
Tolerance cm3/1000 strokes Check tolerance	: 4	- 1.0
cm3/1000s.	: 4	- 4.0
BREAKAWAY		

Rack travel in mm: 10.00
Rated speed rpm: 1235
Tolerance 1/min: +- 5

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: : +-	325 4.60 0.20
Del. quantity cm3/1000 strokes	:	25.0
Tolerance cm3/1000 strokes	: +-	2.5
Check tolerance cm3/1000s.	: +-	5.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	3.0
cm3/1000s.	:	6.0

End of test specification sheet

cm3/1000 strokes : Check tolerance cm3/1000s. :

11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 20.12.95 Edition Test oil : ISO 4113

Combination No. : 0 402 046 850

Injection pump

Pump designation : PES6P120A320RS3320

EP type number : 0 412 026 763

Governor

Governer design. : RQV275...1000PA995

: -2

: 0 421 813 940 Governer no.

Cust. part No. : CCEP-5134 66-211

Customer-spec. information

Customer : RVI

: MIDR 063540 M/3 Motor

: 236.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : **←** 1.5

Test lines : 1 680 750 089 Outside diameter : 8.0

3.0 x inside diameter:

600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

3.40 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 19.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: + 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 12.55

Tolerance mm : + 0.05	707
Del. quantity	+ Rated speed rpm : 393 + guide sleeve
cm3/1000 strokes : 242.0	travel mm : 2.99
	+ Tolerance mm : + 0.20
Tolerance	+
cm3/1000 strokes : + 1.0	Rated speed rpm : 490
Check tolerance	+ guide steeve + travel mm : 3.81
cm3/1000s, : +- 4.0	+ Tolerance mm : + 0.20
	+
Spreed	+ Rated speed rpm : 1370
Tolerance 5.0	guide sleeve
cm3/1000 strokes : 5.0	+ travel mm : 11.50 + Tolerance mm : + 0.50
Check tolerance	Total affection
cm3/1000s. : 9.0	+
	GUIDE SLEEVE POSITION
Rated speed rpm : 300	t Batal and an Adol
Rack travel in mm : -7.40	Rated speed rpm : 1180
Tolerance mm : + 0.20	Rack travel in mm: 11.40
Del. quantity	+ Tolerance mm : +- 1.30
cm3/1000 strokes : 25.0	+
Tolerance	
cm3/1000 strokes : +- 2.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : + 5.0	Rated speed rpm : 600
Spreed	Aneroid pressure
Tolerance	+ hPa : 1000
cm3/1000 strokes : 8.0	+ Del. quantity
Check tolerance	cm3/1000 strokes : 242.0
cm3/1000s. : 12.0	+ Tolerance + cm3/1000 strokes : +- 1.0
	Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : +- 4.0
WITH GOVERNOR	Spreed
	Tolerance
GUIDE SLEEVE TRAVEL	- cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL	+ Check tolerance + cm3/1000s. : 9.0
Rated speed rpm : 300	
guide sleeve	+
travel mm : 1.66	
Tolerance mm : +- 0.10	+ CONTROL LEVER
Rated speed rpm : 1086	T control lever
guide sleeve	position degree : 306.0
travel mm : 8.46	+ tolerance degree : +- 4.0
Tolerance mm : + 0.10	+
Dated aread mm a 777	+ RATED SPEED
Rated speed rpm : 773 guide sleeve	rack travel mm : -1.00
travel mm : 6.09	Rated speed rpm : 1075
Tolerance mm : +- 0.20	+ Tolerance 1/min : + 5
	+
Rated speed rpm : 343	+ rack travel mm : -8.55
guide sleeve travel mm : 2.33	+ Rated speed rpm : 1195 + Tolerance 1/min : + 15
travel mm : 2.33 Tolerance mm : +- 0.20	T Total alice 1/11/11 : T 15
TOLET GIRC 1811 . ' U.LU	I

rack travel mm Tolerance mm Rated speed rpm	: +- 0.55	† † †	Pressure hPa rack travel mm Tolerance mm	: -0.75
LOUITNE			START CUT-OUT	
LOW IDLE		‡	Rated speed rpm Rated speed rpm	: > 100 : < 195
control lever position degree tolerance degree		‡	Check speed 1/min	: > 80
Testing:		Ŧ	Check speed 1/min	: < 215
Rated speed rpm rack travel mm Tolerance mm	: 300 : -7.40 : + 0.10	‡ ‡	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm		‡	Aneroid pressure	: 1000
CRT mm max.	: < -5.90	‡	Rated speed rpm Del. quantity	
Rated speed rpm	: 365	‡	cm3/1000 strokes Tolerance cm3/1000 strokes	
TORQUE CONTROL		+	Check tolerance cm3/1000s.	
Rated speed rpm	: 600	‡	Aneroid pressure	: 1000
Rated speed rpm Tolerance mm	: 1000 : + 0.10	Ţ	Rated speed rpm Del. quantity	: 600
Rated speed rpm	: 600	‡	cm3/1000 strokes Tolerance	
rack travel mm Tolerance mm	: -4.00 : +- 0.10	‡	cm3/1000 strokes Check tolerance	
ANEDOTO / AL TITLINE			cm3/1000s. Spreed Tolerance	: +- 8.0
ANEROID/ALTITUDE COMPENSATOR TEST		Ī	cm3/1000 strokes Check tolerance	: 10.0
SETTING		+	cm3/1000s.	: 14.0
Rated speed rpm	• 500	<u>†</u>	Aneroid pressure	• -
Pressure hPa	: 1000	$\frac{1}{1}$	Rated speed rpm Del. quantity	500
MEASUREMENT		<u> </u>	cm3/1000 strokes	: 156.0
Pressure hPa Rated speed rpm	500	<u> </u>	cm3/1000 strokes Check tolerance	: ← 1.0
rack travel mm Tolerance mm	-2.25 + 0.20	+	cm3/1000s.	: + 4.0
Rated speed rpm	: 500	Ŧ	BREAKAWAY	
Pressure hPa rack travel mm Tolerance mm	: 160 : -1.70 : +- 0.10	* 	Rack travel in mm Rated speed rpm Tolerance 1/min	: 1075

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

300 Rated speed rpm -7.40rack travel mm Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 18.12.95 Edition Test oil : ISO 4113 Combination No. : 0 402 076 787 Injection pump Pump designation : PES6P120A720RS3340 EP type number : 0 412 026 773 Governor : RSV400...1050P0A602 Governer design. : 0 421 833 483 Governer no. Cust. part No. Customer-spec. information Customer : FNH-GEOTECH Motor : EP040B Power KW : 176.0 TEST BENCH REQUIREMENTS Inlet line : 4.2 Test oil inlet temp. °C Tolerance °C : 2 417 413 086 Overflow valve 1.5 Inlet press. bar : 0.1 Tolerance bar Overflow quantity

100

: 1 688 901 103

208.5

1.5

: +- 20.0

DENIADIO	
REMARKS	
(A) INJECTION PUMP Set equal delivery	
per values	_
BEGINNING OF DELIV	VERY
Test pressure bar	: 26.0
Tolerance bar	: + 1.0
Prestroke mm	: 3.60
Tolerance mm Check	: + 0.05
tolerance mm	: +- 0.10
Rack travel in mm	: 10.50 : + 1.50
Tolerance mm	
Firing order	: 1-5-3-6-2 : 4
Phasing	: 0-60-120-180-240 : -300
Tolerance	: +- 0.30
Check tolerance "NW	: +- 0.75
Start of delivery	blocking
Check	
tolerance °NW	: +- 0.30
Barrel no.	: 1
BASIC SETTING	
Rated speed rpm	• 1050

: 1 680 750 089

8.0

Test lines

Outside diameter :

bar

min. l/h
Tolerance l/h

assembly

Test nozzle holde

Opening pressure

Tolerance bar

Rack travel in mm: 11.25 Tolerance mm: + 0.05 Del. quantity cm3/1000 strokes: 158.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s: + 5.0	Del. quantity cm3/1000 strokes : 158.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Spreed Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER control lever
Check tolerance cm3/1000s. : 9.0	position degree : 96.0
Rated speed rpm : 400	RATED SPEED
<u> </u>	rack travel mm : 0.85
Rack travel in mm: 5.00	Tolerance mm : +- 0.55
Tolerance mm : + 0.20	Rated speed rpm : 1320
Del. quantity	
cm3/1000 strokes : 26.0	rack travel mm : 4.00
Tolerance	Rated speed rpm : 1165
cm3/1000 strokes : + 3.0 +	ACCEPTAGE OF CONTRACTOR
Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. $: + 6.0$	
Spreed +	Rated speed rpm : 1093
Tolerance +	rack travel mm : 10.20
cm3/1000 strokes : 8.0 +	
Check tolerance +	Rated speed rpm : 1158
cm3/1000s. : 12.0 +	Tolerance 1/min : + 5
+	rack travel mm : 4.00
1	
(B) SETTING OF INJECTION PUMP	rack travel mm : 0.85
WITH GOVERNOR	Tolerance mm : $+$ 0.55
-	Rated speed rpm : 1320
1	, and a special specia
	Rated speed rpm : 1094
GUIDE SLEEVE POSITION	rack travel mm : 10.20
Rated speed rpm : 800	Rated speed rpm : 1159
massa spess (pm)	Tolerance 1/min : +- 5
Rack travel in mm: 0.50	rack travel mm : 4.00
Tolerance mm : + 0.20	1 4 5 1 4 4 5 2 11111
Toterance iiii	rack travel mm : 0.85
Townson anning	Tolerance mm : +- 0.55
governor spring † pre-tension †	1000: OHO HO 0100
	Rated speed rpm : 1095
click setting x : 4.75	Rated speed rpm : 1095 rack travel mm : 10.20
†	rack travet mm : 10.20
THE LOAD OF THE PARTY AT FIRE LOAD OFFIE	Dated around name a 4440
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1160
1000	Tolerance 1/min : + 5
Rated speed rpm : 1050	rack travel mm : 4.00
Aneroid pressure	
hPa : 1600 +	rack travel mm : 0.85
+	Tolerance mm : +- 0.55

Rated speed rpm	: 1096
rack travel mm	: 10.20
Rated speed rpm Tolerance 1/min rack travel mm	: ← 5
rack travel mm	: 0.85
Tolerance mm	: ← 0.55
Rated speed rpm	: 1097
rack travel mm	: 10.20
Rated speed rpm	: 1162
Tolerance 1/min	: +- 5
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: + 0.55
Rated speed rpm	: 1098
rack travel mm	: 10.20
Rated speed rpm	: 1163
Tolerance 1/min	: + 5
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: + 0.55
LOW IDLE	
control lever position degree	: 75.0
Setting point w/o	out bumper spring
Rated speed rpm	: 400
rack travel mm	: 4.50
Testing:	
Rated speed rpm	: 400
rack travel mm	: 5.00
Tolerance mm	: + 0.10
rack travel mm	: 2.00
Rated speed rpm	: 535
Tolerance 1/min	: +- 50
TORQUE CONTROL	

Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 700 : 12.40 : +- 0.05 : 600
rack travel mm Tolerance mm	: 12.50 : +- 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1600 : 12.50 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : 8.10 : +- 0.10
- Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 980 : 11.40 : + 0.05
FUEL DELIVERY CHA	ARACTERISTICS
- Aneroid pressure	
- hPa - Rated speed rpm	: 1600 : 700
- Del. quantity - cm3/1000 strokes - Tolerance	: 196.0
- cm3/1000 strokes - Check tolerance	: +- 3.0
- cm3/1000s.	: +- 6.0
Aneroid pressure	: -
- Rated speed rpm	: 500
Del. quantity cm3/1000 strokes	: 94.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
-	

Rated speed rpm rack travel mm

Tolerance mm

: 1050 : 11.25 : + 0.05

Rated speed rpm	:		100
rack travel mm	:		20.50
Tolerance mm	•	+-	0.50
Del. quantity			
cm3/1000 strokes	:		150.0
Tolerance			
cm3/1000 strokes	:	+-	15.0
Check tolerance			
cm3/1000s.	:	+-	19.0

LOW IDLE

Rated speed rpm	:	400
rack travel mm		5.00
Tolerance mm	: +	- 0.20
Del. quantity		
cm3/1000 strokes	:	26.0
Tolerance		
cm3/1000 strokes	: +	- 3.0
Check tolerance		
cm3/1000s.	: +	- 6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 18.12.95 Test oil : ISO 4113

Combination No. : 0 402 076 788

Injection pump

Pump designation : PES6P120A720RS3340

EP type number : 0 412 026 773

Governor

Governer design. : RSV400...1050P0A603

Governer no. : 0 421 833 484

Cust. part No. :

Customer-spec. information

Customer : FNH-GEOTECH
Motor : EP 040 B
Power KW : 154.0

TEST BENCH REQUIREMENTS

Inlet Line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 100 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : + 0.75

Start of delivery blocking

Check

tolerance *NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

1	Del. quantity
Rack travel in mm: 10.45 Tolerance mm: + 0.05	cm3/1000 strokes : 136.0 Tolerance
	cm3/1000 strokes : +- 1.0
Del. quantity cm3/1000 strokes : 136.0	Check tolerance cm3/1000S. : + 5.0 Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s. : + 5.0	cm3/1000s. : 9.0
Spreed	
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 76.0 tolerance degree : +- 4.0
Cm5/10005 9.0	toterance degree . +- 4.0
Rated speed rpm : 400	RATED SPEED
Rack travel in mm: 5.00	rack travel mm : 0.85
Tolerance mm : + 0.20 +	Tolerance mm : +- 0.55
Del. quantity	Rated speed rpm : 1320
cm3/1000 strokes : 23.0	rack travel mm : 4.00
cm3/1000 strokes : + 3.0	Rated speed rpm : 1155
Check tolerance +	
cm3/1000s. : + 6.0	ASSEMBLY GOVERNOR SETTING
Tolerance	Rated speed rpm : 1093
cm3/1000 strokes : 8.0 +	rack travel mm : 9.45
Check tolerance	24.1
cm3/1000s. : 12.0	Rated speed rpm : 1153 Tolerance 1/min : +- 5
I	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	rack travel mm : 0.85
1	Tolerance mm : + 0.55
	Rated speed rpm : 1094
GUIDE SLEEVE POSITION	rack travel mm : 9.45
Rated speed rpm : 800	Rated speed rpm : 1154
The special of the sp	Tolerance 1/min : + 5
Rack travel in mm: 0.50 + O.20 +	rack travel mm : 4.00
Total diffe min	rack travel mm : 0.85
governor spring	Tolerance mm : +- 0.55
pre-tension + click setting x : 5.00 +	Rated speed rpm : 1095
click setting x : 5.00	rack travel mm : 9.45
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1155
I ACM MOUNT APPEALENT THE PARTY AND A PART	Tolerance 1/min : +- 5
Rated speed rpm : 1050	rack travel mm : 4.00
Aneroid pressure + hPa : 1500	rack travel mm : 0.85
+	rack travel mm : 0.85 Tolerance mm : + 0.55

Rated speed rpm : 1096 rack travel mm : 9.4	5 ‡	Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.30 : ← 0.10
Rated speed rpm : 1156 Tolerance 1/min : + 5 rack travel mm : 4.0	+	Rated speed rpm rack travel mm Tolerance mm	: 600
rack travel mm : 0.8 Tolerance mm : + 0.5	5 +		
Rated speed rpm : 1097 rack travel mm : 9.4	5	ANEROID/ALTITUDE COMPENSATOR TEST	
Rated speed rpm : 1157 Tolerance 1/min : + 5	+	SETTING	500
rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : + 0.55	+	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1500
Rated speed rpm : 1098 rack travel mm : 9.4		MEASUREMENT	
Rated speed rpm : 1158 Tolerance 1/min : +- 5 rack travel mm : 4.00	‡	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : 8.10
rack travel mm : 0.89 Tolerance mm : +- 0.59	5 +	Rated speed rpm	
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	: 10.80
control lever position degree : 97.0 tolerance degree : +- 4.0	3	FUEL DELIVERY CHA	RACTERISTICS
Setting point w/out bumper s	spring	Aneroid pressure	: 1500
Rated speed rpm : 400 rack travel mm : 5.00	†	Rated speed rpm Del. quantity	: 750
Testing:	Ī	cm3/1000 strokes Tolerance cm3/1000 strokes	
Rated speed rpm : 400 rack travel mm : 4.50 Tolerance mm : + 0.10		Check tolerance cm3/1000S.	: +- 6.0
rack travel mm : 2.00 Rated speed rpm : 535	+	Aneroid pressure hPa Rated speed rpm	: - : 500
Tolerance 1/min : +- 50) 	Del. quantity cm3/1000 strokes	: 92.0
TORQUE CONTROL	† ‡	Tolerance cm3/1000 strokes Check tolerance	: +- 1.0
Rated speed rpm : 1050 rack travel mm : 10.45 Tolerance mm : + 0.05		cm3/1000s.	: + 4.0

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 400 rack travel mm 5.00 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.12.95 Edition Edition : 19.12.95 Test oil : ISO 4113

Combination No. : 0 402 640 817

Injection pump

Pump designation : PE12P120A520LS7826 EP type number : 0 412 620 817

Governor

Governer design. : RQV350...1150PA870

: -4

Governer no. : 0 421 813 717

Cust. part No. : 0180745402

Customer-spec, information Customer : MB-NFZ Motor : OM 444 Power KW : 736.0 : OM 444 LA

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C temp. "C : 40 Tolerance "C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5

Overflow quantity
min. l/h : 160
Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter: 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 12-1-5-9-8

: - 3- 4- 11- 10 : - 2- 6- 7

Phasing : 0-45-60-105-120

: -165-180-225-240 : -285-300-345

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 12

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 15.30

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 306.0

		- Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes	: +- 1.0	
Check tolerance	<u></u>	- GUIDE SLEEVE POSITION
cm3/1000s.	: +- 4.0	- Rated speed rpm : 1275
Spreed		Rack travel in mm: 16.50
Tolerance cm3/1000 strokes	: 6.0	- Tolerance mm : +- 1.30
Check tolerance cm3/1000s.	: 10.0	FULL LOAD DELIVERY AT FULL LOAD STOP
CIID/ (UUUS.	10.0	- Rated speed rpm : 1150
Rated speed rpm	: 350	- Aneroid pressure - hPa : 1300
Rack travel in mr	n: 5.60 +	· Del. quantity
Tolerance mm	: ← 0.30 +	- cm3/1000 strokes : 306.0
Del. quantity	t	- Tolerance
cm3/1000 strokes Tolerance	: 15.0	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes	: +- 3.0 I	- cm3/1000s. : +- 4.0
Check tolerance	I	Spreed 4.0
cm3/1000s.	: +- 6.0	· Tolerance
Spreed	1	cm3/1000 strokes : 6.0
Tolerance	1	Check tolerance
cm3/1000 strokes	: 8.0	cm3/1000s. : 10.0
Check tolerance	+	•
cm3/1000s.	: 12.0 +	
	†	CONTROL LEVED
(B) SETTING OF IN	STECTION DUMP	CONTROL LEVER
WITH GOVERNOR	ADECITOR POWE	control lever
WITTI GOVENION	1	position degree : 117.0
		tolerance degree : + 4.0
GUIDE SLEEVE TRAV	/EL +	RATED SPEED
Rated speed rpm	: 350 +	
guide sleeve	+	rack travel mm : 14.30
travel mm	: 1.55	Rated speed rpm : 1195
Tolerance mm	: + 0.20 +	Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 1206	rack travel mm : 4.00 Rated speed rpm : 1285
travel mm	: 8.15	Tolerance 1/min : + 15
Tolerance mm	: + 0.15 +	
Rated speed rpm	: 600 +	rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve	+	Rated speed rpm : 1350
travel mm	: 3.55	
Tolerance mm	: ← 0.25 +	
Rated speed rpm guide sleeve	: 960	LOW IDLE
travel mm	: 5.55	
Tolerance mm	: + 0.25	centrol lever
Data danced	1201	position degree : 66.0
Rated speed rpm guide sleeve	: 1291	tolerance degree : +- 4.0
travel mm	: 10.05 +	Testing:

Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.60	+ Check + speed 1/min : < 330	
		FUEL DELIVERY CHARACTERISTICS	
Rated speed rpm	: 250	+ Aneroid pressure	
CRT mm min.	: > 7.30	hPa : 1300 + Rated speed rpm : 750	
Rated speed rpm	: 475	Del. quantity cm3/1000 strokes : 315.0	
TORQUE CONTROL			
Rated speed rpm	: 1150_	Check tolerance : +- 8.0	
rack travel mm Tolerance mm	: 15.30 : + 0.05	+ Spreed + Tolerance + cm3/1000 strokes : 10.0	
Rated speed rpm rack travel mm Tolerance mm	: 750 · 15 40	Check tolerance cm3/1000s. : 15.0	
Tolerance mm	: + 0.10	Aneroid pressure	
ANEROID/ALTITUDE COMPENSATOR TEST		hPa : 1300 Rated speed rpm : 1150 Del. quantity	
GOTH ENOTHER TEST		cm3/1000 strokes : 234.5	
SETTING		cm3/1000 strokes : +- 1.5 Check tolerance	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1300 : 15 30	cm3/1000s. : +- 4.5 Spreed + Tolerance	
Tolerance mm	: +- 0.05	cm3/1000 strokes : 10.0 Check tolerance	
MEASUREMENT		cm3/1000s. : 15.0	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 8.45 : +- 0.15	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity	
Rated speed rpm		the cm3/1000 strokes : 124.0 to the cm3/1000 to the cm3/1000 strokes : 124.0 to the cm3/1000 s	
Pressure hPa rack travel mm	: 300 : 10.20	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	
Tolerance mm Pressure hPa	: +- 0.05	Spreed Tolerance cm3/1000 strokes : 10.0	
rack travel mm Tolerance mm	: 13.80	Check tolerance cm3/1000s. : 15.0	
START CUT-OUT		BREAKAWAY	
Rated speed rpm Rated speed rpm		Rack travel in mm : 14.30 Rated speed rpm : 1195	
Check speed 1/min	: > 180	+ Tolerance 1/min : +- 5	

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 331.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

350 Rated speed rpm rack travel mm 5.60 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 15.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance

cm3/1000 strokes : Check tolerance

cm3/1000s.

End of test specification sheet

8.0

12.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 14.12.95 Edition : ISO 4113 Test oil

Combination No. : 0 402 640 842

Injection pump

Pump designation : PE12P120A520/5RS7304

EP type number : 0 412 620 838

Governor

Governer design. : RQV300...550/1050PA1

: 093

: 0 421 814 067 Governer no.

Cust. part No. :

Customer-spec. information

Customer : MWM

: TBD234-FAUN Motor

TEST BENCH REQUIREMENTS

Inlet line : 3.1.3.2

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 025

Overflow quantity

170 min. L/h : + 10.0 Tolerance l/h

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

208.5 bar - 1.5 Tolerance bar

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

5,20 Prestroke mm : + - 0.05Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 19.50

Tolerance mm : \leftarrow 1.50

: 1-2-9-10-5-6 Firing order

: - 11- 12- 3- 4

: - 7- 8

: 0-30-60-90-120-150 Phasing

: -180-210-240-270

: -300-330

Tolerance : + - 0.30

Check

tolerance °NW : + - 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.60

Tolerance mm : - 0.05

Del. quantity

cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : +- 1.0

		l guido closvo
Check tolerance		<pre>+ guide sleeve + travel mm : 6.00</pre>
cm3/1000s.	; 	+ Tolerance mm : + 0.25
CIID7 (0003.	. +- 4.0	T roter ance min
Spreed	<u> </u>	+ Rated speed rpm : 1260
Tolerance		+ guide sleeve
cm3/1000 strokes	: 6.0	travel mm : 11.50
CHEY TOOG SETURES	. 0.0	+ Tolerance mm : + 0.50
Check tolerance		T roterance unit
cm3/1000s.	; 9.0	
CIRCY TOBOO!	. ,.0	GUIDE SLEEVE POSITION
Rated speed rpm	: 300	T doing occess 1 oot 1 tols
Mateu Speed I piii	. 300	+ Rated speed rpm : 1160
Rack travel in mm	. 6.75	Thatea opeca i pin . Tros
Tolerance mm	: +- 0.20	+ Rack travel in mm : 14.00
Del. quantity		+ Tolerance mm : +- 1.00
cm3/1000 strokes	: 38.0	1 ocor direction
Tolerance	. 44.5	
cm3/1000 strokes	: +- 5.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		-
cm3/1000S.	: + 8.0	Rated speed rpm : 1050
Spreed		+ Aneroid pressure
Tolerance	•	+ hPa : 1250
cm3/1000 strokes	: 8.0	→ Del. quantity
Check tolerance		+ cm3/1000 strokes : 235.0
cm3/1000S.	: 12.0	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
(B) SETTING OF IN.	JECTION PUMP	+ cm3/1000s. : +- 4.0
WITH GOVERNOR		+ Spreed
	•	+ Tolerance
		cm3/1000 strokes : 6.0
GUIDE SLEEVE TRAVE	EL ·	+ Check tolerance
	. 700	+ cm3/1000s. : 9.0
Rated speed rpm	: 300	†
guide sleeve	: 1.30	1
travel mm	1 11	CONTROL LEVED
Tolerance mm	: + 0.25	CONTROL LEVER
Rated speed rpm	: 1107	control lever
guide sleeve	. 1107	
travel mm		<u> </u>
CI GACE HAIL	• 6.75	+ position degree : 51.0
	: 6.75 : + 0.25	tolerance degree : 51.0
Tolerance mm	: 6.75 : +- 0.25	tolerance degree : + 4.0
Tolerance mm	: +- 0.25	tolerance degree : + 4.0 control lever
Tolerance mm Rated speed rpm		tolerance degree : + 4.0 control lever position degree : 115.0
Tolerance mm Rated speed rpm guide sleeve	: +- 0.25 : 1050	tolerance degree : + 4.0 control lever
Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 0.25 : 1050 : 6.00	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0
Tolerance mm Rated speed rpm guide sleeve	: +- 0.25 : 1050	tolerance degree : + 4.0 control lever position degree : 115.0
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 0.25 : 1050 : 6.00	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: +- 0.25 : 1050 : 6.00 : +- 0.25	tolerance degree : +- 4.0 control lever position degree : 115.0 tolerance degree : +- 4.0 RATED SPEED
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 0.25 : 1050 : 6.00 : +- 0.25	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1155
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55 : +- 0.25 : 636	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55 : +- 0.25 : 636 : 6.00	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55 : +- 0.25 : 636	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15 rack travel mm : 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55 : +- 0.25 : 636 : 6.00 : +- 0.25	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: +- 0.25 : 1050 : 6.00 : +- 0.25 : 586 : 5.55 : +- 0.25 : 636 : 6.00	tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1155 Tolerance 1/min : + 15 rack travel mm : 0.50

		Rated speed rpm	: 500
LOW IDLE		Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Check speed 1/min Check speed 1/min FUEL DELIVERY CHA	: 10.70
control lever position degree tolerance degree	: 85.0 : +- 4.0	Pressure hPa rack travel mm Tolerance mm	: 12.20
control lever position degree tolerance degree	: 20.0 : +- 4.0	Pressure hPa rack travel mm Tolerance mm	: 13.60
Testing:		Pressure hPa	: 1450
Rated speed rpm rack travel mm Tolerance mm	: 300 : 6.75 : ← 0.10	rack travel mm Tolerance mm	
Rated speed rpm		START CUT-OUT	
CRT mm min.		Rated speed rpm Rated speed rpm	
Rated speed rpm	: 300	Check speed 1/min	: > 80
TORQUE CONTROL		Check speed 1/min	: < 240
Rated speed rpm	: 1050		
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 13.60 : ← 0.05 : 800 : 13.60 : ← 0.05 : 500 : 14.70	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1250 : 800 : 234.0 : +- 3.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 13.60 : ← 0.05 : 800 : 13.60 : ← 0.05 : 500 : 14.70	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1250 : 800 : 234.0 : +- 3.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 13.60 : ← 0.05 : 800 : 13.60 : ← 0.05 : 500 : 14.70	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1250 : 800 : 234.0 : +- 3.0 : +- 6.0
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 13.60 : ← 0.05 : 800 : 13.60 : ← 0.05 : 500 : 14.70 : ← 0.05 : 500 : 14.70	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1250 : 800 : 234.0 : +- 3.0 : +- 6.0 : : 500 : 144.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 13.60 : ← 0.05 : 800 : 13.60 : ← 0.05 : 500 : 14.70 : ← 0.05 : 500 : 2000	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance	: 1250 : 800 : 234.0 : +- 3.0 : +- 6.0 : 500 : 144.0 : +- 2.0

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 274.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 300 6.75 rack travel mm 0.20 Tolerance mm Del. quantity cm3/1000 strokes : 38.0 Tolerance cm3/1000 strokes 5.0 Check tolerance cm3/1000s. 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.12.95 Test oil : ISO 4113

Combination No. : 0 402 646 606

Injection pump

Pump designation : PE6P12OA72ORS7188

: -100

EP type number : 0 412 626 925

Governor

Governer design. : RQV200...950PA725

: -10

Governer no. : 0 421 814 002

Cust. part No. : 1338073

Customer—spec. information
Customer : SCANIA
Motor : DSC 11 32

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration

damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \div 0.30

Check

tolerance "NW : + 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.55
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 214.0

cm3/1000 strokes : + 1.0	
	CONTROL LEVER
Check tolerance cm3/1000s. : +- 4.0	control lever
Spreed	- position degree : 59.0 - tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : 8.0	- control lever
Check tolerance cm3/1000s. : 12.0	- position degree : 114.0 - tolerance degree : +- 4.0
Rated speed rpm : 250	- RATED SPEED
rated speed rpm . 250	- rack travel mm : 11.50
Check tolerance cm3/1000s. : 12.0 Rated speed rpm : 250 Rack travel in mm : 4.70 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed	Rated speed rpm : 995 Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 16.0	- - rack travel mm : 4.00 - Rated speed rpm : 1105
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	- Rated speed rpm : 1105 - Tolerance 1/min : + 15
cm3/1000s. : + 6.0	- rack travel mm : 0.50 - Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 4.0	- Rated speed rpm : 1250
Check tolerance	
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	• •
WITH GOVERNOR +	- control lever - position degree : 64.0
	- position degree : 64.0 - tolerance degree : + 4.0
GUIDE SLEEVE POSITION	- control lever
T	
Rated speed rpm : 1140	position degree : 10.0 tolerance degree : + 4.0
Rack travel in mm: 9.50	position degree : 10.0
+	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250
Rack travel in mm: 9.50	position degree : 10.0 tolerance degree : + 4.0 Testing:
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa: -	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa: - Del. quantity cm3/1000 strokes: 214.0	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa Del. quantity	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa: - Del. quantity cm3/1000 strokes: 214.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 TORQUE CONTROL Rated speed rpm : 700
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa: - Del. quantity cm3/1000 strokes: 214.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes: 8.0	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 TORQUE CONTROL
Rack travel in mm: 9.50 Tolerance mm: + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 700 Aneroid pressure hPa: - Del. quantity cm3/1000 strokes: 214.0 Tolerance cm3/1000 strokes: + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	position degree : 10.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 12.55

Tolerance mm	: +- 0.05	+
		Rack travel in mm: 11.50
ANEROID/ALTITUDE COMPENSATOR TEST		Rated speed rpm : 995 Tolerance 1/min : + 5
SETTING		STARTING FUEL DELIVERY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.55 : + 0.05	Rated speed rpm : 100 rack travel mm : 10.40 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 165.0
MEASUREMENT		Tolerance cm3/1000 strokes : + 20.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.40 : + 0.20	Check tolerance cm3/1000s. : +- 24.0
Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 270 : 11.00 : + 0.15 : 440 : 12.05	LOW IDLE Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 16.0
Tolerance mm	: +- 0.05	Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed
FUEL DELIVERY CHA	RACTERISTICS	Tolerance cm3/1000 strokes : 4.0
Aneroid pressure hPa Rated speed rpm	: - : 950	+ Check tolerance + cm3/1000s. : 8.0
Del. quantity cm3/1000 strokes Tolerance		
cm3/1000 strokes Check tolerance	: ← 4.0	
cm3/1000s.	: +- 6.0	End of test specification sheet
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - : 500 : 153.0 : + 1.0	† + + + +
Check tolerance cm3/1000s.	: +- 4.0	+ +
BREAKAWAY		+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.12.95 Test oil : ISO 4113

Combination No. : 0 402 646 650

Injection pump

Pump designation : PE6P13DA72ORS7354 EP type number : 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -2K

Governer no. : 0 421 815 434

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8210.42.4000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : +- 0.05
Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 13.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Check

tolerance *NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 13.10
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 274.0

Tolerance

cm3/1000 strokes : + 1.0

G06

	+	
Check tolerance cm3/1000s.	: + 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance		Rated speed rpm : 1185
cm3/1000 strokes	5.0	Rack travel in mm : 12.00 Tolerance mm : +- 1.30
Check tolerance cm3/1000s.	: 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm	: 300	Rated speed rpm : 950
Rack travel in mm Tolerance mm	: 4.80 : + 0.20	Aneroid pressure hPa : 900
Del. quantity cm3/1000 strokes	: 22.0	Del. quantity cm3/1000 strokes : 274.0
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000S. Spreed	: + 6.0	cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes	: 8.0	Tolerance cm3/1000 strokes : 5.0
Check tolerance cm3/1000s.	: 12.0	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF IN	IECTION DIMP	
WITH GOVERNOR	J2011010 F 05 #F	CONTROL LEVER
GUIDE SLEEVE TRAVE	<u> </u>	<pre>control lever position degree : 114.0 tolerance degree : +- 4.0</pre>
Rated speed rpm guide sleeve	: 300	RATED SPEED
travel mm Tolerance mm	: 1.65 : + 0.20	rack travel mm : 12.10
Rated speed rpm guide sleeve	: 1010	Rated speed rpm : 995 Tolerance 1/min : +- 5
travel mm Tolerance mm	: 8.75 : +- 0.15	rack travel mm : 4.00 Rated speed rpm : 1110
Rated speed rpm guide sleeve	: 755	Tolerance 1/min : +- 15 rack travel mm : 0.50
travel mm Tolerance mm	: 6.15 : + 0.25	Tolerance mm : +- 0.50 Rated speed rpm : 1300
Rated speed rpm guide sleeve	: 500	
travel mm Tolerance mm	: 3.75 : + 0.25	LOW IDLE
Rated speed rpm guide sleeve	: 1340	control lever position degree : 69.0
travel mm Tolerance mm	: 13.50 : + 0.50	tolerance degree : +- 4.0
	‡	Testing:

Rated speed rpm	: 300	+ Check
rack travel mm Tolerance mm	: 4.80 : +- 0.10	+ speed 1/min :> 160 + Check
rocerance min	: 0.10	+ speed 1/min : < 240
Rated speed rpm	: 375	+
		- + FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		+
Rated speed rpm	: 950	+ Aneroid pressure + hPa : 900
rack travel mm	: 13.10	Rated speed rpm : 550
Tolerance mm	: ← 0.05	+ Del. quantity
Rated speed rpm	. 700	+ cm3/1000 strokes : 286.0 + Tolerance
rack travel mm	: 12.90	+ cm3/1000 strokes : +- 3.0
Tolerance mm	: + 0.10	+ Check tolerance
Rated speed rpm	: 550	+ cm3/1000s. : +- 6.0
rack travel mm Tolerance mm	: 12.10	Aneroid pressure
Tolerance mm	: + 0.10	+ hPa : - Rated speed rpm : 550
Rated speed rpm	: 300	+ Del. quantity
rack travel mm	: 11.80	- cm3/1000 strokes : 173.0
Tolerance mm	: +- 0.30	+ Tolerance + cm3/1000 strokes : +- 1.0
		Check tolerance
ANEROID/ALTITUDE		† cm3/1000s. : ← 4.0
COMPENSATOR TEST		
CETTING		BREAKAWAY
SETTING		Ī
Rated speed rpm	: 950 : 900 : 13.10	Rack travel in mm: 12.10
Pressure hPa	: 900 : 13 10	+ Rated speed rpm : 995 + Tolerance 1/min : +- 5
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: +- 0.05	+ Total and Trimin
MEASUREMENT		İ
		T STARTING FUEL DELIVERY
Pressure hPa	950	+ Rated speed rpm : 100
Rated speed rpm rack travel mm	: 950 : 8.60	+ Rated speed rpm : 100 + Del. quantity
Tolerance mm	: +- 0.20	+ cm3/1000 strokes : 154.0
Rated speed rpm	: 950	+ Tolerance + cm3/1000 strokes : +- 15.0
		+ Check tolerance
Pressure hPa	: 320 : 9.95	+ cm3/1000s. : +- 19.0
rack travel mm Tolerance mm	÷ + 0.20	I
		+
Pressure hPa rack travel mm	: 610 : 12.20	+ LOW IDLE
Tolerance mm	: +- 0.05	+
		+ Rated speed rpm : 300 + rack travel mm : 4.80
START CUT-OUT		+ rack travel mm : 4.80 + Tolerance mm : + 0.20
		+ Del. quantity
Rated speed rpm Rated speed rpm	: > 180 : < 220	+ cm3/1000 strokes : 22.0 + Tolerance
nated speed (pill	LEU	cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.12.95 Test oil : ISO 4113

Combination No. : 0 402 646 887

Injection pump

Pump designation : PE6P120A720RS7188

: -10

EP type number : 0 412 626 924

Governor

Governer design. : RQV200...950PA725-7

Governer no. : 0 421 813 803

Cust. part No. : 1333122

Customer-spec. information Customer : SCANIA : DSC 11 23 Motor

TEST BENCH REQUIREMENTS

: 4.2 Inlet line

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 190
Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 4.45 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.85

Tolerance mm : +- 0.05

	1	Tolerance	
Del. quantity cm3/1000 strokes	: 252.0	cm3/1000 strokes Check tolerance	
Tolerance cm3/1000 strokes	· + 1.0	cm3/1000s.	: 12.0
	Ţ	CONTROL LEVER	
Check tolerance cm3/1000s.	: + 4.0	control lever	
Spreed Tolerance cm3/1000 strokes	: 8.0	position degree tolerance degree	
Check tolerance		control lever position degree	: 114.0
cm3/1000S.	: 12.0	tolerance degree	: +- 4.0
Rated speed rpm	: 250	RATED SPEED	
Rack travel in mm Tolerance mm Del. quantity	: + 0.30	rack travel mm Rated speed rpm Tolerance 1/min	: 12.80 : 995 : + 5
cm3/1000 strokes Tolerance	: 16.0	rack travel mm	: 4.00
cm3/1000 strokes Check tolerance	: + 3.0	Rated speed rpm Tolerance 1/min	: 1125 : +- 15
cm3/1000s. Spreed	: + 6.0	rack travel mm	: 0.50
Tolerance cm3/1000 strokes	: 4.0	Tolerance mm Rated speed rpm	: +- 0.50 : 1250
		Naced Speed Pill	. 1250
Check tolerance cm3/1000s.	: 8.0	Naced Speed Pill	. 1250
Check tolerance	: 8.0	LOW IDLE	. 1250
Check tolerance cm3/1000s. (B) SETTING OF INJ	: 8.0	LOW IDLE	: 64.0
Check tolerance cm3/1000s. (B) SETTING OF INJUSTING GOVERNOR	: 8.0	LOW IDLE	: 64.0
Check tolerance cm3/1000s. (B) SETTING OF INJ	: 8.0 ECTION PUMP	LOW IDLE control lever position degree tolerance degree control lever position degree	: 64.0 : + 4.0 : 10.0
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm Rack travel in mm	: 8.0 ECTION PUMP	LOW IDLE control lever position degree tolerance degree control lever position degree tolerance degree	: 64.0 : + 4.0 : 10.0
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm	: 8.0 ECTION PUMP	LOW IDLE control lever position degree tolerance degree control lever position degree tolerance degree Testing:	: 64.0 : +- 4.0 : 10.0 : +- 4.0
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm Rack travel in mm Tolerance mm	: 8.0 ECTION PUMP	LOW IDLE control lever position degree tolerance degree control lever position degree tolerance degree Testing: Rated speed rpm	: 64.0 : + 4.0 : 10.0 : + 4.0
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITI Rated speed rpm Rack travel in mm Tolerance mm	: 8.0 ECTION PUMP TON : 1150 : 9.50 : + 2.50 AT FULL LOAD STOP	LOW IDLE control lever position degree tolerance degree control lever position degree tolerance degree Testing:	: 64.0 : + 4.0 : 10.0 : + 4.0
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure	: 8.0 ECTION PUMP TION : 1150 : 9.50 : + 2.50 AT FULL LOAD STOP : 700	LOW IDLE control lever position degree tolerance degree control lever position degree tolerance degree Testing: Rated speed rpm	: 64.0 : + 4.0 : 10.0 : + 4.0 : 250 : 4.70 : + 0.10
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity	: 8.0 ECTION PUMP TION : 1150 : 9.50 : + 2.50 AT FULL LOAD STOP : 700 : -	control lever position degree tolerance degree control lever position degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm	: 64.0 : + 4.0 : + 4.0 : + 4.0 : + 4.0 : + 4.70 : + 0.10 : 150
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 8.0 ECTION PUMP TON : 1150 : 9.50 : + 2.50 AT FULL LOAD STOP : 700 : - : 252.0	control lever position degree tolerance degree control lever position degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm	: + 64.0 : + 4.0 : + 4.0 : + 4.0 : 250 : 4.70 : + 0.10 : 150 : > 6.00
Check tolerance cm3/1000s. (B) SETTING OF INJUITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm Rack travel in mm Tolerance mm FULL LOAD DELIVERY Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	: 8.0 ECTION PUMP TON : 1150 : 9.50 : + 2.50 AT FULL LOAD STOP : 700 : - : 252.0	control lever position degree tolerance degree control lever position degree tolerance degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm Rated speed rpm CRT mm min.	: + 64.0 : + 4.0 : + 4.0 : + 4.0 : 250 : 4.70 : + 0.10 : 150 : > 6.00

rack travel mm Tolerance mm	: 13.85 : ← 0.05		
ANEROID/ALTITUDE COMPENSATOR TEST			
SETTING			
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 13.85 : +- 0.05		
MEASUREMENT			
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.40 : + 0.20		
Rated speed rpm	: 500		
Pressure hPa rack travel mm Tolerance mm	: 270 : 11.00 : + 0.15		
Pressure hPa rack travel mm Tolerance mm	: 440 : 12.05 : + 0.05		
FUEL DELIVERY CHARACTERISTICS			
Aneroid pressure hPa	:		
Rated speed rpm Del. quantity	: 950		
cm3/1000 strokes Tolerance	: 237.0		
cm3/1000 strokes Check tolerance	: +- 4.0		
cm3/1000s.	: +- 6.0		
Aneroid pressure hPa	:		
Rated speed rpm Del. quantity	: 500		
cm3/1000 strokes Tolerance	: 153.0		
cm3/1000 strokes Check tolerance	: +- 1.0		
cm3/1000s.	: +- 4.0		
PDEAKALIAN			

Rack travel in mm : 12.80
Rated speed rpm : 995
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.40
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 165.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 250 rack travel mm 4.70 Tolerance mm : + 0.30Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

End of test specification sheet

BREAKAWAY

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.12.95 Test oil : ISO 4113

Combination No. : 0 402 646 937

Injection pump

Pump designation : PE6P12OA72ORS7188

: -100

EP type number : 0 412 626 925

Governor

Governer design. : RQV200...950PA725-7

Governer no. : 0 421 813 803

Cust. part No. : 1333121

Customer—spec. information Customer : SCANIA Motor : DSC11 21

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.75
Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 220.0

Tolerance - cm3/1000 strokes : +- 1.0	
	- CONTROL LEVER
Check tolerance - 4.0 - 4.0	- control lever
Spreed	position degree : 112.0 tolerance degree : +- 4.0
Tolerance	
cm3/1000 strokes : 8.0	- control lever - position degree : 60.0
Check tolerance cm3/1000s. : 12.0	tolerance degree : +- 4.0
-	- RATED SPEED
Rated speed rpm : 250	- - rack travel mm : 11.70
Rack travel in mm: 4.70	- Rated speed rpm : 995
Tolerance mm : +- 0.30 Del. quantity	- Tolerance 1/min : +- 5
cm3/1000 strokes : 16.0	- rack travel mm : 4.00 - Rated speed rpm : 1120
cm3/1000 strokes : + 3.0	Tolerance 1/min : + 15
Check tolerance cm3/1000S. : + 6.0	- - rack travel mm : 0.50
Spreed	- Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 4.0	- Rated speed rpm : 1250 -
Check tolerance + 8.0 +	-
	- LOW IDLE
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR	- control lever - position degree : 10.0
+	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	- control lever
Rated speed rpm : 1150	 position degree : 62.0 tolerance degree : +- 4.0
' '	
DOOD THOUGHT AND TO USE 1	
Rack travel in mm: 9.50 + Tolerance mm: + 2.50 +	Testing:
- 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 111	Rated speed rpm : 250
- 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 1111 - 111	•
Tolerance mm : + 2.50	Rated speed rpm : 250 rack travel mm : 4.70
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : -	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. :> 6.00 Rated speed rpm : 275
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 TORQUE CONTROL
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. :> 6.00 Rated speed rpm : 275
Tolerance mm : + 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	Rated speed rpm : 250 rack travel mm : 4.70 Tolerance mm : + 0.10 Rated speed rpm : 150 CRT mm min. : > 6.00 Rated speed rpm : 275 TORQUE CONTROL Rated speed rpm : 950

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.75
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.40
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 270
rack travel mm : 11.00
Tolerance mm : + 0.15

Pressure hPa : 440 rack travel mm : 12.05 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 950

Del. quantity

cm3/1000 strokes : 209.0

Tolerance

cm3/1000 strokes : + 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 153.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm: 11.70

Rated speed rpm : 995
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.40
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 165.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm 250 rack travel mm 4.70 Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.12.95 Test oil : ISO 4113

Combination No. : 0 402 648 793

Injection pump

Pump designation : PE8P12OA32OLS7873 EP type number : 0 412 628 880

Governor

Governer design. : RQ300/1050PA1268 Governer no. : 0 421 801 802

Cust. part No. : 04223118KY0165-17

Customer—spec. information Customer : KHD

Motor : BF8M1015/C

Power KW : 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C :

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.05 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1-8-7-2-6

: - 5- 4- 3

Phasing : 0-45-90-135-180

: -225-270-315 : +- 0.30

Tolerance

Check

tolerance $^{\circ}NW$: + 0.50

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 14.00 Tolerance mm : + 0.05

TOTAL CONTRACTOR OF THE PROPERTY OF THE PROPER

Del. quantity

cm3/1000 strokes : 340.0

		+ Rated speed rpm : 1290
Tolerance cm3/1000 strokes	: + 1.0	guide sleeve travel mm: : 11.50 Tolerance mm: : + 0.50
Check tolerance cm3/1000s.	: +- 4.0	+
Spreed Tolerance cm3/1000 strokes	: 5.0	GUIDE SLEEVE POSITION Rated speed rpm : 1149
Check tolerance cm3/1000s.	; 9.0	Rack travel in mm: 13.00 Tolerance mm: + 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in ma Tolerance mm Tolerance	: + 0.10	Rated speed rpm : 1050 Aneroid pressure hPa : 1600
cm3/1000 strokes Check tolerance cm3/1000s.	: + 3.0 : + 6.0 -	Del. quantity + cm3/1000 strokes : 340.0 + Tolerance
Spreed Tolerance cm3/1000 strokes	: 8.0	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Check tolerance cm3/1000s.	: 12.0	Spreed Tolerance cm3/1000 strokes : 5.0
(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP	Check tolerance cm3/1000s. : 9.0
GUIDE SLEEVE TRAV	/EL	CONTROL LEVER
Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.66 : + 0.20	control lever position degree : 97.0 tolerance degree : + 4.0
Rated speed rpm guide sleeve	: 1106	RATED SPEED rack travel mm : 13.00
travel mm Tolerance mm	: 6.53 : + 0.15	+ Rated speed rpm : 1100 + Tolerance 1/min : +- 10
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1050 : 6.00 : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : + 15
Rated speed rpm guide sleeve	: 458	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1280
travel mm Tolerance mm	: 4.21 : + 0.10	
Rated speed rpm guide sleeve	: 580	LOW IDLE
travel mm Tolerance mm	: 6.00 : + 0.10	+ control lever + position degree : 72.0

tolerance degree Testing:	: +- 4.0	Check speed 1/min : < 240
Rated speed rpm	: 300	FUEL DELIVERY CHARACTERISTICS
rack travel mm Tolerance mm	: 6.00	Aneroid pressure
rack travel mm Rated speed rpm Tolerance 1/min	: 449	hPa : - Rated speed rpm : 400 Del. quantity cm3/1000 strokes : 250.0
Rated speed rpm		Tolerance - cm3/1000 strokes : +- 1.0
CRT mm min.	: > 7.26	cm3/1000s. : + 4.0
TORQUE CONTROL		BREAKAWAY
Rated speed rpm rack travel mm Tolerance mm	: 14.00	Rack travel in mm: 13.00 Rated speed rpm: 1100 Tolerance 1/min: + 10
ANEROID/ALTITUDE COMPENSATOR TEST		
SETTING		STARTING FUEL DELIVERY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1600 : 14.00	+ Rated speed rpm : 100 + rack travel mm : 9.45 + Tolerance mm : + 0.75 + Tolerance - cm3/1000 strokes : + 20.0
MEASUREMENT		+ Check tolerance - cm3/1000S. : + 24.0
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		}
Rated speed rpm	: 400	LOW IDLE
Pressure hPa rack travel mm Tolerance mm		Rated speed rpm : 300 rack travel mm : 6.00 Tolerance mm : + 0.10 Tolerance
Pressure hPa rack travel mm Tolerance mm	: 13.00	cm3/1000 strokes : + 3.0 - Check tolerance - cm3/1000s. : + 6.0 - Spreed
START CUT-OUT		+ Tolerance + cm3/1000 strokes : 8.0
Rated speed rpm Rated speed rpm	: > 100 : < 220	+ Check tolerance + cm3/1000s. : 12.0
Check speed 1/min	: > 80	‡

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 18.12.95 : ISO 4113

Combination No. : 0 402 736 888

Injection pump

Pump designation : PES6P120A120RS7390

EP type number : 0 412 726 945

Governor

Governer design. : RQV350...1100PA1237K

Governer no. : 0 421 815 475

Cust. part No. : 3282740

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 162.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. L/h Tolerance l/h

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.30 : + 0.05Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm: 20.50 : +- 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: + 0.30Tolerance

Check

tolerance °NW : + 0.50

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : + - 0.50Check

tolerance 'NW

: + 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.60

Tolerance mm	: +- 0.05	1
		Rated speed rpm : 1380
Del. quantity	: 164.0	guide sleeve
cm3/1000 strokes	: 164.0	+ travel mm : 13.50 + Tolerance mm : + 0.50
Tolerance		+
cm3/1000 strokes	: + 1.0	GUIDE SLEEVE POSITION
Check tolerance		+ GOIDE SPEENE LOSTITON
cm3/1000s.	: ← 4.0	Rated speed rpm : 1200
Spreed		+ Rack travel in mm : 11.60
Tolerance		+ Tolerance mm : + 1.50
cm3/1000 strokes	; 5.0	+
Check tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 9.0	T FOLL LOAD DELIVERY AT FOLE LOAD STOP
		Rated speed rpm : 1100
Rated speed rpm	: 350	+ Aneroid pressure + hPa : 1500
Rack travel in mm	: 4.80	T Del. quantity
Tolerance mm	: ← 0.30	+ cm3/1000 strokes : 164.0
Del. quantity	19.0	Tolerance
cm3/1000 strokes Tolerance	: 18.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
cm3/1000 strokes	: +- 3.0	- cm3/1000s. : +- 4.0
Check tolerance		Spreed
cm3/1000s. Spreed	: +- 5.0	Tolerance : 5.0
Tolerance		Check tolerance
cm3/1000 strokes	: 7.0	cm3/1000s. : 9.0
Check tolerance cm3/1000s.	: 11.0	<u>†</u>
CIID7 10000:	. ,,,,,	
(m) 05777110 05 711	IFOTTON OUM	CONTROL LEVER
(B) SETTING OF IN. WITH GOVERNOR	JECITON PUMP	control lever
WITH GOAFWAOK		position degree : 69.0
		tolerance degree : + 4.0
GUIDE SLEEVE TRAVE	ĒL ·	t control lever
Rated speed rpm	: 350	position degree : 123.0
guide sleeve		tolerance degree : + 4.0
travel mm Tolerance mm	: 1.93 : + 0.20	+ RATED SPEED
loterance mm	: 0.20	RATED SPEED
Rated speed rpm	: 1159	rack travel mm : 11.60
guide sleeve	. 10.37	+ Rated speed rpm : 1145 + Tolerance 1/min : + 5
travel mm Tolerance mm	: 10.27 : + 0.15	Tolerance 1/min : +- 5
	-	rack travel mm : 4.00
Rated speed rpm	: 710	Rated speed rpm : 1230
guide sleeve travel mm	: 5.79	Tolerance 1/min : +- 15
Tolerance mm	÷ + 0.25	rack travel mm : 0.50
	400	Tolerance mm : + 0.50
Rated speed rpm	: 420	Rated speed rpm : 1350
guide sleeve travel mm	: 4.28	
Tolerance mm	: +- 0.25	+

***************************************		‡	rack travel mm Tolerance mm	: 10.25 : + 0.20
LOW IDLE		+	Rated speed rpm	
control lever position degree tolerance degree		+++++++++++++++++++++++++++++++++++++++	Pressure hPa rack travel mm Tolerance mm	: 170 : 11.10
control lever position degree tolerance degree		+++++++++++++++++++++++++++++++++++++++	Pressure hPa rack travel mm Tolerance mm	: 330 : 12.10 : + 0.05
Testing:		‡	START CUT-OUT	
Rated speed rpm rack travel mm Tolerance mm		<u> </u>	Rated speed rpm Rated speed rpm	
Rated speed rpm CRT mm min.	: 250 : > 7.70	Ī	Check speed 1/min Check	: > 80
Rated speed rpm	: 350	‡	speed 1/min	: < 300
TODOUT CONTROL			FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.60 : + 0.05 : 750 : 12.30 : + 0.10 : 900 : 12.35 : + 0.15 : 600	+++++++++++++++++++++++++++++++++++++++	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 155.0 : + 3.0 : + 6.0 : 12.0 : 16.0
ANEROID/ALTITUDE COMPENSATOR TEST		+++++++++++++++++++++++++++++++++++++++	Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 107.0
SETTING		+	Check tolerance cm3/1000s.	: + 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1500 : 12.60 : ← 0.05	+++++++++++++++++++++++++++++++++++++++	BREAKAWAY	
MEASUREMENT		‡	Rack travel in mm	
Pressure hPa Rated speed rpm	: - : 1100	+	Rated speed rpm Tolerance 1/min	

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 255.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm 350 4.80 rack travel mm Tolerance mm 0.30 Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 5.0 Spreed Tolerance 7.0 cm3/1000 strokes : Check tolerance cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.12.95 Test oil : ISO 4113

Combination No. : 0 402 736 889

Injection pump

Pump designation : PES6P12OA12ORS7390

EP type number : 0 412 726 945

Governor

Governer design. : RQV350...1100PA1244K

Governer no. : 0 421 815 477

Cust. part No. : 3282739

Customer-spec. information Customer : CUMMINS Motor : 6CTAA : 179.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 90 Tolerance L/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30
Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance 'NW : + 0.50

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.00

Tolerance mm : +- 0.05	1
Total artic and	Rated speed rpm : 1380
Del. quantity	- guide sleeve
cm3/1000 strokes : 173.0	+ travel mm : 13.50 + Tolerance mm : +- 0.50
Tolerance	Toterance min : 7- 0.50
cm3/1000 strokes : +- 1.0	
	GUIDE SLEEVE POSITION
Check tolerance	1105
cm3/1000s. : +- 4.0	Rated speed rpm : 1195
Spreed	Rack travel in mm: 12.00
Tolerance	Tolerance mm : + 1.30
cm3/1000 strokes : 5.0	+
Charle dal annua	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : 9.0	+ FOLL LOAD DELIVERY AT FULL LOAD STOP
(110) 10000:	Rated speed rpm : 1100
Rated speed rpm : 350	+ Aneroid pressure
2.1	+ hPa : 1500
Rack travel in mm : 4.60 Tolerance mm : +- 0.30	+ Del. quantity + cm3/1000 strokes : 173.0
Del. quantity	+ Tolerance
cm3/1000 strokes : 18.0	+ cm3/1000 strokes : + 1.0
Tolerance	- Check tolerance
cm3/1000 strokes : + 3.0	+ cm3/1000s. : +- 4.0
Check tolerance cm3/1000S. : + 5.0	+ Spreed + Tolerance
Spreed	+ cm3/1000 strokes : 5.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 7.0	+ cm3/1000s. : 9.0
Check tolerance	†
cm3/1000s. : 11.0	İ
	+ CONTROL LEVER
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ control lever
	+ position degree : 68.0 + tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	tolerance degree : + 4.U
TO SOLUTION THE SOLUTION TO SO	
Rated speed rpm : 350	+ position degree : 122.0
guide sleeve travel mm : 1.93	tolerance degree : +- 4.0
travel mm : 1.93 Tolerance mm : + 0.20	T RATED SPEED
TOTE ATTOC AND	10000000
Rated speed rpm : 1159	rack travel mm : 12.00
guide sleeve	+ Rated speed rpm : 1145
travel mm : 10.27 Tolerance mm : + 0.15	Tolerance 1/min : + 5
Tolerance mm : + 0.15	Track travel mm : 4.00
Rated speed rpm : 710	+ Rated speed rpm : 1230
guide sleeve	+ Tolerance 1/min : + 15
travel mm : 5.79	
Tolerance mm : +- 0.25	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
Rated speed rpm : 420	Rated speed rpm : 1350
guide sleeve	+
travel mm : 4.28	†
Tolerance mm : $+$ 0.25	+

		Pressure hPa : 140
LOW IDLE		+ rack travel mm : 11.10
		+ Tolerance mm : + 0.20
		+
control lever		+ Pressure hPa : 300
osition degree	: 74.0	+ rack travel mm : 12.60
lerance degree	: 4.0	+ Tolerance mm : + 0.05
		+
ontrol lever		
osition degree	: 20.0	+ START CUT-OUT
olerance degree	: ← 4.0	+
		+ Rated speed rpm : > 100
esting:		+ Rated speed rpm : < 290
ted speed rpm	: 350	+ Check
ck travel mm		+ speed 1/min : > 80
lerance mm	: ← 0.10	+ Check
		+ speed 1/min : < 300
ted speed rpm	: 250	+
T mm min.	: > 7.50	FUEL DELIVERY CHARACTERISTICS
		+
ated speed rpm	: 350	+ Aneroid pressure
		+ hPa : 1500
		Rated speed rpm : 700
RQUE CONTROL		+ Del. quantity
		+ cm3/1000 strokes : 171.0
ted speed rpm	: 1100	Tolerance
k travel mm		+ cm3/1000 strokes : $+$ 3.0
erance mm	: +- 0.05	+ Check tolerance
to, altee time	0.02	- cm3/1000s. : +- 6.0
ted speed rpm	: 700	Spreed
ck travel mm		+ Tolerance
lerance mm		cm3/1000 strokes : 8.0
terance mm	0.10	
	. F00	Check tolerance
ted speed rpm		+ cm3/1000s. : 12.0
ck travel mm	: 12.25	Annuald
lerance mm	: +- 0.15	+ Aneroid pressure
		+ hPa : -
		Rated speed rpm : 500
EROID/ALTITUDE		+ Del. quantity
MPENSATOR TEST		+ cm3/1000 strokes : 109.0
		+ Tolerance
		+ cm3/1000 strokes : + 2.0
TTING		+ Check tolerance
		+ cm3/1000s. : $+$ 4.0
ted speed rpm		+
ssure hPa	: 1500	-
k travel mm	: 13.20	+ BREAKAWAY
erance mm	: + 0.05	+
		+
SUREMENT		Rack travel in mm: 12.00
		Rated speed rpm : 1145
essure hPa	: -	+ Tolerance 1/min : + 5
ed speed rpm	700	
k travel mm		1
erance mm	: + 0.20	
SECTION THE	0.20	STARTING FUEL DELIVERY
d anaad ===	: 700	- OFWITHA LOFF NEFTNEW!
ed speed rpm	. (00	T

Rated speed rpm rack travel mm Tolerance mm	:		100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:		255.0
cm3/1000 strokes Check tolerance	:	+-	20.0
cm3/1000s.	:	+-	24.0

LOW IDLE

:		350
:		4.60
*	+-	0.30
:		18.0
:	+-	3.0
:	+-	5.0
:		7.0
:		11.0
		: +-

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.12.95 Test oil : ISO 4113

Combination No. : 0 402 736 892

Injection pump

Pump designation : PES6P12OA12ORS7400

EP type number : 0 412 726 950

Governor

Governer design. : RQV350...1100PA1244

: -1K

Governer no. : 0 421 815 488

Cust. part No. : 3282610

Customer-spec. information
Customer : CUMMINS
Motor : 6CTAA
Power KW : 221.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40 Tolerance *C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : \leftarrow 0.50

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 14.60

Tolerance mm : + 0.05

Del. quantity	+	guide sleeve
cm3/1000 strokes	: 209.0	travel mm : 13.50 Tolerance mm : + 0.50
Tolerance	+	
cm3/1000 strokes	: + 1.0	GUIDE SLEEVE POSITION
Check tolerance	+	
cm3/1000s.	: +- 4.0	Rated speed rpm : 1220
Spreed	<u></u>	Rack travel in mm: 13.60
Tolerance	+	Tolerance mm : + 1.30
cm3/1000 strokes	: 5.0	
Check tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s.	: 9.0	TOLE LOAD DELIVERY AT TOLE LOAD STOP
		Rated speed rpm : 1100
Rated speed rpm	: 350	Aneroid pressure
	1	hPa : 1500
Rack travel in mm	: 4.80	Del. quantity
Tolerance mm		cm3/1000 strokes : 209.0
Del. quantity	1	Tolerance
cm3/1000 strokes	· 25 n I	cm3/1000 strokes : +- 1.0
Tolerance	· 25.0	Check tolerance
cm3/1000 strokes	: + 3.0 I	cm3/1000s. : +- 4.0
Check tolerance	7	Spreed 4.8
cm3/1000s.	: +- 5.0 I	Tolerance
	7	cm3/1000 strokes : 5.0
Spreed	Ť	
Tolerance	7.0	Check tolerance
cm3/1000 strokes	: 7.0	cm3/1000s. : 9.0
Check tolerance	1	
cm3/1000s.	: 11.0 +	
	†	
4-5	†	CONTROL LEVER
(B) SETTING OF IN	JECTION PUMP +	
WITH GOVERNOR	+	control lever
	†	position degree : 66.0
	+	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVE	EL +	
	+	control lever
Rated speed rpm	: 350 +	position degree : 120.0
guide sleeve	+	tolerance degree : +- 4.0
travel mm	: 1.93	
Tolerance mm	: + 0.20 +	RATED SPEED
9 () 1	1450	
Rated speed rpm	: 1159	rack travel mm : 13.60
guide sleeve	†	Rated speed rpm : 1145
travel mm	: 10.28 +	Tolerance 1/min : +- 5
Tolerance mm	: +- 0.15	
	+	rack travel mm : 4.00
Rated speed rpm	: 710 +	Rated speed rpm : 1245
guide sleeve	+	Tolerance 1/min : + 15
travel mm	: 5.80 +	
Tolerance mm	: + 0.25 +	rack travel mm : 0.50
	+	Tolerance mm : +- 0.50
Rated speed rpm	: 430	Rated speed rpm : 1350
guide sleeve	+	
travel mm	: 4.33	
Tolerance mm	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
1000 at 100 limit	: + 0.25	
TOTAL MENT		LOW IDLE

	_
control lever position degree : 73.0 tolerance degree : +- 4.0	- Pressure hPa : 880 - rack travel mm : 13.20 - Tolerance mm : + 0.20
control lever position degree : 20.0 tolerance degree : +- 4.0	- Pressure hPa : 240 - rack travel mm : 11.20 - Tolerance mm : +- 0.05
Testing:	- START CUT-OUT
Rated speed rpm : 350 rack travel mm : 4.80 Tolerance mm : +- 0.10	- Rated speed rpm : > 100 - Rated speed rpm : < 280
Rated speed rpm : 250	- Check
CRT mm min. :> 8.10	- speed 1/min :> 80 - Check
Rated speed rpm : 350	- speed 1/min : < 300
	- FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL	n none id processor
Rated speed rpm : 1100	- Aneroid pressure - hPa : 1500
rack travel mm : 14.60	- Rated speed rpm : 750
Tolerance mm : + 0.05	Del. quantity
Rated speed rpm : 1100 rack travel mm : 14.60 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 14.05 Tolerance mm : + 0.10 Rated speed rpm : 900 rack travel mm : 14.35 Tolerance mm : + 0.15 Rated speed rpm : 600	- cm3/1000 strokes : 198.0
Rated speed rpm : 750	- Tolerance
rack travel mm : 14.05	- cm3/1000 strokes : +- 3.0
Tolerance mm : \leftarrow 0.10	Check tolerance
	cm3/1000s. : +- 6.0
Rated speed rpm : 900 + rack travel mm : 14.35 +	Spreed
rack travel mm : 14.35 + Tolerance mm : + 0.15 +	- Tolerance - cm3/1000 strokes : 8.0
Tolerance mm : \leftarrow 0.15	Check tolerance
Rated speed rpm : 600	cm3/1000s. : 12.0
rack travel mm : 13.95	
Tolerance mm : + 0.15	Aneroid pressure
4	hPa : -
	Rated speed rpm : 500
ANEROID/ALTITUDE +	Del. quantity
COMPENSATOR TEST	cm3/1000 strokes : 111.0
†	Tolerance : +- 2.0
SETTING	Check tolerance
3211110	cm3/1000s. : +- 4.0
Rated speed rpm : 1100	· · · · · · · · · · · · · · · · · · ·
Pressure hPa : 1500	
rack travel mm : 14.60	BREAKAWAY
Tolerance mm : + 0.05	
MEASUREMENT	Rack travel in mm: 13.60
Dragging hPa	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Pressure hPa : - + + + + + + + + + + + + + + + + + +	TOLERANCE TANKIT . T. J
rack travel mm : 10.45	
Tolerance mm : + 0.20 +	
	STARTING FUEL DELIVERY
Rated speed rpm : 1100 +	
, .	

Rated speed rpm	: 100
rack travel mm	: 12.00
Tolerance mm	: ← 0.50
Del. quantity	
cm3/1000 strokes	: 255.0
Tolerance	
cm3/1000 strokes	: +- 20.0
Check tolerance	
cm3/1000S.	: + 24.0
011107 1 00001	

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm Del. quantity	: +-	350 4.80 0.30	
cm3/1000 strokes	:	25.0	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s.	: +-	5.0	
Spreed Tolerance			
cm3/1000 strokes	:	7.0	
Check tolerance cm3/1000s.	:	11.0	

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 18.12.95 : ISO 4113 Edition Test oil

Combination No. : 0 402 736 893

Injection pump

Pump designation : PES6P120A120RS7400

EP type number : 0 412 726 950

Governor

Governer design. : RQV350...1100PA1244

: -2K

Governer no. : 0 421 815 489

Cust. part No. : 3282609

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 206.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : \div 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

,	• • •
Rack travel in mm: 14.80	guide sleeve travel mm : 4.70
Tolerance mm : + 0.05 +	Tolerance mm : + 0.25
Total di lice han	Toterance min
Del. quantity	Rated speed rpm : 1380
cm3/1000 strokes : 211.0	guide sleeve
+	travel mm : 13.50
Tolerance +	Tolerance mm : + 0.50
cm3/1000 strokes : + 1.0 +	
Charl Aslanan	CUIDE OF FELE DOCTTON
Check tolerance + 4.0 +	GUIDE SLEEVE POSITION
	Rated speed rpm : 1215
Spreed	Naced Speed Ipin . IE13
Tolerance	Rack travel in mm : 13.30
cm3/1000 strokes : 5.0	Tolerance mm : + 2.00
Check tolerance +	
cm3/1000s. : 9.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
750	Data di anno di una
Rated speed rpm : 350	Rated speed rpm : 1050
Rack travel in mm: 5.10	Aneroid pressure hPa : 1500
Tolerance mm : + 0.30	Del. quantity
Del. quantity	cm3/1000 strokes : 211.0
cm3/1000 strokes : 25.0 +	Tolerance
Tolerance	cm3/1000 strokes : + 1.0
cm3/1000 strokes : \leftarrow 3.0 \uparrow	Check tolerance
Check tolerance +	cm3/1000s. : + 4.0
cm3/1000s. : +- 5.0 +	Spreed
Spreed +	Tolerance
Tolerance + cm3/1000 strokes : 7.0 +	cm3/1000 strokes : 5.0
cm3/1000 strokes : 7.0 + Check tolerance +	Check tolerance cm3/1000s. : 9.0
cm3/1000s. : 11.0	tiid/10003 7.0
11.0	
+	
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR +	
+	control lever
OUTDE OF TOTAL TOT	position degree : 66.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
Rated speed rpm : 350	control lever
guide sleeve	position degree : 122.0
travel mm : 1.93	tolerance degree : + 4.0
Tolerance mm : + 0.20 +	
+	RATED SPEED
Rated speed rpm : 1159 +	
guide sleeve +	rack travel mm : 13.80
travel mm : 10.28 +	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Tolerance mm : ← 0.15	Tolerance 1/min : +- 5
Rated speed rpm : 710	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1245
travel mm : 5.79	Tolerance 1/min : + 15
Tolerance mm : + 0.25	
+	rack travel mm : 0.50
Rated speed rpm : 500 +	Tolerance mm : + 0.50
+	Rated speed rpm : 1350

		1		
			Pressure hPa	: 880
LOW IDLE		+	rack travel mm	
		+	Tolerance mm	: 0.20
		+		-1-
ontrol lever		+	Pressure hPa	: 240
sition degree	: 73.0	+	rack travel mm	: 11.20
rance degree	: ← 4.0	+	Tolerance mm	: +- 0.05
_		+		
ol lever		+		<u> </u>
n degree	: 20.0	+	START CUT-OUT	
ce degree	: ← 4.0	+		
		+	Rated speed rpm	: > 100
		1	Rated speed rpm	
		1		
d rpm	: 350	+	Check	
mm		1	speed 1/min	: > 80
mm .	: + 0.10	1	Check	
in i i	0.10	\mathbf{I}	speed 1/min	: < 300
nnm	: 250	I	Specu minn	. \ JUU
ed rpm	. 200	I		
in.	: > 8.20	I	FUEL DELIVERY CHA	RACTERISTICS
117 18	0.20	1	I WELL VEHENVEINI VIII	
eed rpm	: 350	1	Aneroid pressure	
. 6-114		1	hPa	: 1500
		<u> </u>	Rated speed rpm	
OL.			Del. quantity	• 000
/L_		T	cm3/1000 strokes	. 107.0
	. 4050	†		: 177.0
m	: 1050	†	Tolerance	
m		†	cm3/1000 strokes	: ← 3.0
	: +- 0.05	+	Check tolerance	, -
		+	cm3/1000s.	: +- 6.0
rpm	: 650	+	Spreed	
m	: 14.20	+	Tolerance	
		1	cm3/1000 strokes	: 12.0
		1	Check tolerance	
rpm	: 900	1	cm3/1000s.	: 16.0
ייים אי	: 14.70	I		. 10.0
m m	: +- 0.15	T	Ananaid massums	
m	; - 0 .15	†	Aneroid pressure	
		†	hPa	500
			Rated speed rpm	: 500
UDE		†	Del. quantity	444 5
TEST		†	cm3/1000 strokes	: 111.0
		+	Tolerance	
		+	cm3/1000 strokes	: +- 2.0
		+	Check tolerance	
		+	cm3/1000s.	: +- 4.0
rpm	: 1050	+		
	: 1500	+		
וו	: 14.80	1	BREAKAWAY	
***	: + 0.05	1		
	0.05	1		
r		1	Rack travel in mm	: 13.80
		1	Rated speed rpm	
Pa		I	Tolerance 1/min	
m	1050	I	TOTAL GLICE TABLET	• •
rpm		T		
mm	: 10.40	†		
תח	: ← 0.20	†		

Rated speed rpm : 1050

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

350 Rated speed rpm 5.10 rack travel mm 0.30 Tolerance mm Del. quantity 25.0 cm3/1000 strokes Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes 7.0 Check tolerance 11.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18,12,95 Edition : 18.12.95
Test oil : ISO 4113

Combination No. : 0 402 736 894

Injection pump

Pump designation : PES6P120A120RS7400

EP type number : 0 412 726 950

Governor

Governer design. : RQV350...1200PA1261

Governer no. : 0 421 815 495

Cust. part No. : 3282766

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 191.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.50

Start of delivery blocking

"NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 13.95

Tolerance mm : + 0.05 +	-
+	Rated speed rpm : 1520
Del. quantity + cm3/1000 strokes : 190.0 +	- guide sleeve - travel mm : 13.50
	Tolerance mm : + 0.50
Tolerance + 1	•
cm3/1000 strokes : +- 1.0	GUIDE SLEEVE POSITION
Check tolerance	•
cm3/1000s. : +- 4.0	Rated speed rpm : 1340
Spreed	Rack travel in mm : 12.60
Tolerance	Tolerance mm : + 2.00
cm3/1000 strokes : 5.0	
Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : 9.0	. Dated aread non a 1450
Rated speed rpm : 350	Rated speed rpm : 1150 Aneroid pressure
+	hPa : 1500
Rack travel in mm: 5.10	Del. quantity
Tolerance mm : + 0.30 + Del. quantity	cm3/1000 strokes : 190.0 Tolerance
cm3/1000 strokes : 25.0	cm3/1000 strokes : + 1.0
Tolerance	Check tolerance
cm3/1000 strokes : + 3.0	cm3/1000s. : +- 4.0
Check tolerance + 5.0 +	Spreed Tolerance
Spreed	cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 7.0 + Check tolerance	cm3/1000s. : 9.0
cm3/1000s. : 11.0	
+	
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR	control lever
+	position degree : 66.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
GOIDE SEELVE TANVEL	control lever
Rated speed rpm : 350 +	position degree : 120.0
guide sleeve + travel mm : 1.93 +	tolerance degree : +- 4.0
Tolerance mm : + 0.20	RATED SPEED
+	40.00
Rated speed rpm : 1258 +	rack travel mm : 12.90 Rated speed rpm : 1245
travel mm : 10.14	Tolerance 1/min : + 5
Tolerance mm : + 0.15	
Dated arread mm . 766	rack travel mm : 4.00
Rated speed rpm : 766 + guide sleeve +	Rated speed rpm : 1360 Tolerance 1/min : +- 15
travel mm : 5.91	
Tolerance mm : +- 0.25	rack travel mm : 0.50
Rated speed rpm : 450	Tolerance mm : +- 0.50 Rated speed rpm : 1450
guide sieeve +	THE STATE OF THE S
travel mm : 4.49 +	
Tolerance mm : +- 0.25 +	

		- † Pressure hPa : 880
LOW IDLE		rack travel mm : 13.20 Tolerance mm : + 0.20
control lever		Pressure hPa : 240
position degree	: 74.0	rack travel mm : 11.20
tolerance degree	: +- 4.0	Tolerance mm : + 0.05
control lever		
position degree	: 20.0	+ START CUT-OUT
tolerance degree	: +- 4.0	Rated speed rpm : > 100
Testing:		Rated speed rpm : < 280
Rated speed rpm	: 350	T Check
rack travel mm	5.10	speed 1/min :> 80
Tolerance mm	: +- 0.10	+ Check
Rated speed rpm	: 250	speed 1/min : < 300
CRT mm min.	: > 8.20	+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 350	Aneroid pressure
		+ hPa : 1500
		Rated speed rpm : 600
TORQUE CONTROL		+ Del. quantity + cm3/1000 strokes : 176.0
Rated speed rpm	: 1150	+ Tolerance
rack travel mm		- cm3/1000 strokes : +- 3.0
Tolerance mm		- Check tolerance
		+ cm3/1000s. : + 6.0
Rated speed rpm	: 600	Spreed
rack travel mm		+ Tolerance
Tolerance mm	: ← 0.10	+ cm3/1000 strokes : 12.0
Dahad awaad was	. 750	+ Check tolerance + cm3/1000s. : 16.0
Rated speed rpm rack travel mm	: 750 : 14.05	† cm3/1000s. : 16.0
Tolerance mm		Aneroid pressure
10cci di 10c ilili		+ hPa : -
		- + Rated speed rpm : 500
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 111.0
		Tolerance
SETTING		+ cm3/1000 strokes : +- 2.0 + Check tolerance
DE LITIAO		+ cm3/1000s. : +- 4.0
Rated speed rpm	: 1150	
Pressure hPa	: 1500	
rack travel mm	: 13.95	+ BREAKAWAY
Tolerance mm	: + 0.05	†
MEAGUDEMENT		Dook though in The 12 CO
MEASUREMENT		+ Rack travel in mm : 12.90 - Rated speed rpm : 1245
Pressure hPa	• -	Tolerance 1/min : +- 5
Rated speed rpm	1150	
rack travel mm	: 10.40	+
Tolerance mm	: + 0.20	
	4455	+ STARTING FUEL DELIVERY
Rated speed rpm	: 1150	+

Rated speed rpm	:	100
rack travel mm	:	20.50
Tolerance mm	; +	- 0.50
Del. quantity		
cm3/1000 strokes	:	265.0
Tolerance		
cm3/1000 strokes	: +	- 20.0
Check tolerance		
cm3/1000s.	; +	- 24.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 350 : 5.10 : + 0.30 : 25.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: ← 3.0 : ← 5.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 7.0 : 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 19.12.95 Test oil : ISO 4113

Combination No. : 0 403 276 010

Injection pump

Pump designation : PES6MW100/720RS1526

EP type number : 0 413 206 025

Governor

Governer design. : RSV350...1200MW0A355

: -3

Governer no. : 0 420 085 275

Cust. part No. : 0260748202

Customer—spec. information Customer : MB-NFZ Motor : 0M3661

Motor : 0M366LA Power KW : 100.8

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 11.15

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 96.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

		+		
Check tolerance cm3/1000s.	: 6.0	- +	control lever position degree	. 100 0
		Ŧ	tolerance degree	: +- 4.0
Rated speed rpm	: 350	‡	RATED SPEED	
Rack travel in mm	: 3.50	1	111125 01 225	
Tolerance mm		1	rack travel mm	1.00
Del. quantity	0,00	1	Tolerance mm	
cm3/1000 strokes	: 12.0	1	Rated speed rpm	
Tolerance	. (2.0	1	Nacea Speed I pill	. 1700
cm3/1000 strokes	• + 20	I	rack travel mm	. 4.00
Check tolerance	2.0	\mathbf{I}	Rated speed rpm	: 4.00 : 1315
cm3/1000s.	: +- 4.5	I	Naced Speed 1 pm	. 1313
Spreed	• • •••	I	rack travel mm	: 10.15
Tolerance		I	Rated speed rpm	
cm3/1000 strokes	: 3.5	\mathbf{I}	Tolerance 1/min	
Check tolerance	. 3.3	Ι	rocerance inimit	• • •
	: 5.5	I	ASSEMBLY GOVERNOR	SETTING
CIID/ TUUUS.	. 5.5	I	ASSEMBLI GOVERNOR	SELLTING
		1	Rated speed rpm	: 1240
(B) SETTING OF INJ	FETTON PHMP	1	rack travel mm	
WITH GOVERNOR	LC (LC (V) C (II	I	I der ei dvet iiiii	. 10.15
WITH GOVERNOR		I	Rated speed rpm	: 1300
		I	Tolerance 1/min	
		T	rack travel mm	
GUIDE SLEEVE POSIT	TON	I	rack travet mm	. 4.00
doing affect Logit	1014	I	Rated speed rpm	: 1241
Rated speed rpm	• 800	\mathbf{I}	rack travel mm	: 10.15
rated speed thin	. 000	I	Leck flaget was	. 10.15
Rack travel in mm	. 0.65	I	Rated speed rpm	: 1301
	: +- 0.35	\perp	Tolerance 1/min	
toterance man	0.55	\mathbf{I}	rack travel mm	
governor spring		I	rack travet timi	. 4.00
pre-tension		1	Rated speed rpm	• 1242
click setting x	: 3.75	1	rack travel mm	: 1242 : 10.15
certa secening x	. 3.73	1	TOOK CI GVCC HAIT	. 10.15
		1	Rated speed rpm	: 1302
FILL LOAD DELTVERY	AT FULL LOAD STOP	1	Tolerance 1/min	
TOLE COMP DELLICITY	717 7022 20710 0101	1	rack travel mm	4.00
Rated speed rpm	: 1200	1	Table Cravee mili	. ,,,,,
Aneroid pressure		1	Rated speed rpm	: 1243
hPa	: 1000	1	rack travel mm	: 10.15
Del. quantity	. , , , , ,	1		
cm3/1000 strokes	: 96.0	1	Rated speed rpm	: 1303
Tolerance	. , , , , ,	1	Tolerance 1/min	: +- 4
	: +- 1.0	1	rack travel mm	4.00
Check tolerance		1	vacio di avec illin	
cm3/1000s.	: +- 3.0	1	Rated speed rpm	: 1244
Spreed		1	rack travel mm	: 10.15
Tolerance		1		
	: 3.5	1	Rated speed rpm	: 1304
Check tolerance		1	Tolerance 1/min	: +- 4
cm3/1000s.	: 6.0	1	rack travel mm	4.00
unio/ (Gudo)		1		
		1	Rated speed rpm	: 1245
		1	rack travel mm	: 10.15
CONTROL LEVER		1	The second secon	
		1	Rated speed rpm	: 1305
		+	Tolerance 1/min	: +- 4
		'		•

rack travel mm	: 4.00	†
LOW IDLE		- FUEL DEL
Testing:		Aneroid + hPa
Rated speed rpm rack travel mm Tolerance mm		Rated sp Del. que cm3/1000 Tolera
rack travel mm Rated speed rpm Tolerance 1/min Rated speed rpm CRT mm min.	; 430 ; +- 30	- cm3/1000 - Check to - cm3/1000 - Spreed - Tolerand - cm3/1000 - Check to - cm3/1000
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 11.15 : + 0.05 : 750	hPa Rated sp Del. qua cm3/1000 Tolerand cm3/1000 Spreed Tolerand cm3/1000 Check to cm3/1000 Aneroid hPa Rated sp Del. qua cm3/1000 Tolerand cm3/1000 Tolerand cm3/1000
ANEROID/ALTITUDE COMPENSATOR TEST		STARTING Rated sp
SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1000	+ Del. qua + cm3/1000 + Tolerand - cm3/1000 + Check to - cm3/1000
MEASUREMENT Pressure hPa Rated speed rpm Tolerance mm	: - : 500 : + 0.10	LOW IDLE
Rated speed rpm		Rated sp
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 400 : 1.00 : + 0.10 : 300 : 0.50 : + 0.10	Toleranc Del. qua cm3/1000 Toleranc cm3/1000 Check to cm3/1000 Spreed Toleranc cm3/1000
		+

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1000 : 750 : 93.0 : + 1.5 : + 4.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 5.5 : 7.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 500 : 65.0 : + 1.0 : + 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 120.0 : ← 5.0 : ← 8.0

LOW IDLE Rated speed rpm : 350 rack travel mm : 3.50 Tolerance mm : + 0.30 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.12.95 Test oil : ISO 4113

Combination No. : 0 400 463 121

Injection pump

Pump designation : PES3A80D410/3RS1324

EP type number : 0 410 483 017

Governor

Governer design. : RSV325...900A7C602

: -4L

Governer no. : 0 420 232 604

Cust. part No. :

Customer—spec. information Customer : KHD Motor : F3L912

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.95
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1- 3- 2

Phasing : 0-120-240

BASIC SETTING

Rated speed rpm : 880

Rack travel in mm : 11.20 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 50.5

Tolerance cm3/1000 strokes : +- 0.5

כווט זנוטא לכווט

Check tolerance

cm3/1000s. : + 2.0

Spreed Tolerance

cm3/1000 strokes : 2.3

Check tolerance cm3/1000s.

4.0

Rated speed rpm : 325	
1	rack travel mm : 4.00
Rack travel in mm: 8.40	Rated speed rpm : 960
Tolerance mm : + 0.10 + Del. quantity	Tolerance 1/min : +- 15
cm3/1000 strokes : 11.0	rack travel mm : 0.85
Tolerance	Tolerance mm : + 0.55
cm3/1000 strokes : +- 1.5	Rated speed rpm : 1100
Check tolerance	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
cm3/1000s. : +- 3.5	rack travel mm : 4.00
Spreed	Rated speed rpm : 975
Tolerance +	
cm3/1000 strokes : 4.0 +	
cm3/1000s. : 6.0	LOW IDLE
1	TOW INCE
1	
(B) SETTING OF INJECTION PUMP	control lever
WITH GOVERNOR +	position degree : 77.0
+	tolerance degree : +- 4.0
	Satting point Woult human anning
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
	Rated speed rpm : 325
Rated speed rpm : 800	rack travel mm : 7.90
+	
Rack travel in mm: 0.50	Testing:
Tolerance mm : + 0.20	Datad anal man 1 705
<u> </u>	Rated speed rpm : 325 rack travel mm : 8.40
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.10
TOLK LOND DELLIENT NI TOLK LOND OTO	TO COLCULATION CHILD
Rated speed rpm : 880 +	rack travel mm : 2.00
Aneroid pressure	Rated speed rpm : 450
hPa : - +	Tolerance 1/min : + 30
Del. quantity	
cm3/1000 strokes : 50.5	TORQUE CONTROL
cm3/1000 strokes : + 0.5	PORQUE CONTROL
Check tolerance	Rated speed rpm : 880
cm3/1000s. : + 2.0	rack travel mm : 11.20
Spreed	Tolerance mm : +- 0.05
Tolerance	
cm3/1000 strokes : 2.5	Rated speed rpm : 500
Check tolerance + cm3/1000s. : 4.0 +	rack travel mm : 11.25 Tolerance mm : + 0.10
cm3/1000s. : 4.0	roterance mm : To b. 10
1	
CONTROL LEVER	
†	
control lever	DDCAMANAY
position degree : 108.0 + tolerance degree : + 4.0 +	BREAKAWAY
Total dilice deglies . The 4.0	
RATED SPEED	Rack travel in mm : 10.20
	Rated speed rpm : 925
rack travel mm : 10.20	Tolerance 1/min : + 5
Rated speed rpm : 925	
Tolerance 1/min : + 5 +	

STARTING FUEL DELIVERY

Rated speed rpm 100 20.25 rack travel mm Tolerance mm : +- 0.75 Del. quantity

cm3/1000 strokes :

125.0

Tolerance

cm3/1000 strokes 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

325 Rated speed rpm rack travel mm 8.40 0.10 Tolerance mm Del. quantity cm3/1000 strokes 11.0 Tolerance 1.5 cm3/1000 strokes Check tolerance cm3/1000s. 3.5 Spreed Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.01.96 Test oil : ISO 4113

Combination No. : 0 400 876 425

Injection pump

Pump designation : PES6A95D41ORS2864 EP type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A2C2263

: -7L

: 0 420 232 606 Governer no.

Cust. part No. : 87 800 861

Customer-spec. information

Customer : FNH-GEOTECH

: 7.5 L Motor : 149.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.60 : + 0.05Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 800

Rack travel in mm: 14.10 Tolerance mm : \leftarrow 0.10

Del. quantity cm3/1000 strokes : 151.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

Check tolerance 8.0

cm3/1000S.

Rated speed rpm : 650	ASSEMBLY GOVERNOR SETTING
Rack travel in mm : 4.60 Tolerance mm : + 0.10 Del. quantity	Rated speed rpm : 1093 rack travel mm : 11.60
cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : + 2.0	Rated speed rpm : 1128 Tolerance 1/min : + 5 rack travel mm : 4.00
Check tolerance cm3/1000s. : +- 4.5 Spreed	rack travel mm : 0.85 Tolerance mm : + 0.55
Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1094 rack travel mm : 11.60
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1129 Tolerance 1/min : + 5 rack travel mm : 4.00
WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : + 0.55
GUIDE SLEEVE POSITION Rated speed rpm : 800	Rated speed rpm : 1095 rack travel mm : 11.60
Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	Rated speed rpm : 1130 Tolerance 1/min : + 5 rack travel mm : 4.00
<pre>governor spring pre-tension click setting x : 2.50</pre>	rack travel mm : 0.85 Tolerance mm : + 0.55
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1096 rack travel mm : 11.60
Rated speed rpm : 800 Aneroid pressure hPa : 1200	Rated speed rpm : 1131 Tolerance 1/min : + 5 rack travel mm : 4.00
Del. quantity cm3/1000 strokes : 151.0 Tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	Rated speed rpm : 1097 rack travel mm : 11.60
Spreed Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 1132 Tolerance 1/min : + 5 rack travel mm : 4.00
Check tolerance cm3/1000s. : 8.0	rack travel mm : 0.85 Tolerance mm : + 0.55
CONTROL LEVER	Rated speed rpm : 1098 rack travel mm : 11.60
control lever position degree : 100.0 tolerance degree : + 4.0	Rated speed rpm : 1133 Tolerance 1/min : + 5 rack travel mm : 4.00

rack travel mm Tolerance mm	: 0.85 : + 0.55	MEASUREMENT
LOW IDLE	<u> </u>	Pressure hPa : - Rated speed rpm : 500 rack travel mm : 7.80 Tolerance mm : +- 0.05
control lever position degree tolerance degree	: 78.0 : +- 4.0	Rated speed rpm : 500
Setting point w/ou	t bumper spring	Pressure hPa : 775 rack travel mm : 13.50 Tolerance mm : +- 0.05
Rated speed rpm rack travel mm	: 650 : 4.10	Pressure hPa : 520 rack travel mm : 11.10
Testing: Rated speed rpm	. 450	Tolerance mm : +- 0.20
rack travel mm	: 4.60 : + 0.10	FUEL NELTWEDY CHARACTERIOTICS
rack travel mm Rated speed rpm Tolerance 1/min	: 740 +	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500
TORQUE CONTROL		Del. quantity cm3/1000 strokes : 70.5 Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 14.10 +	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0
Rated speed rpm rack travel mm Tolerance mm	: 500 : 14.15 : + 0.10	
	: 1050 : 11.90 : + 0.05	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 0.20
Rated speed rpm : rack travel mm : Tolerance mm :	: 1050 : 12.60 : + 0.10	Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 8.0
Rated speed rpm : rack travel mm : Tolerance mm :	: 950 : 13.35 : + 0.10	Check tolerance cm3/1000s. : +- 11.0
ANEROID/ALTITUDE COMPENSATOR TEST		LOW IDLE
SETTING	‡	Rated speed rpm : 650 rack travel mm : 4.60 Tolerance mm : + 0.10
Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm :	: 500 : 1200 : 14.15 : +- 0.10	Del. quantity cm3/1000 strokes : 20.0 Tolerance cm3/1000 strokes : +- 2.0
	,	

Check tolerance cm3/1000S. Spreed	: +-	4.5
Tolerance cm3/1000 strokes Check tolerance	•	5.5
cm3/1000s.	:	9.0

		t
BOSCH INJ. PUMP T	TEST SPECIFICATIONS	x inside diameter: 3.0 x Length mm : 1000
Note remarks		1
Refer to Service adjustment instru See microcard(s)		REMARKS
Edition Test oil	: 03.08.95 : ISO 4113	(A) INJECTION PUMP SETTING VALUES
Combination No.	: 0 401 846 959	Set equal delivery quant. per values
Injection pump Pump designation EP type number	: PE6P120A720R\$3293 : 0 411 826 801	BEGINNING OF DELIVERY
	: RQV2251000PA1016	Test pressure bar : 26.0 Tolerance bar : + 1.0
Governer no.	: 0 421 813 971	Prestroke mm : 3.55 Tolerance mm : + 0.05 Check
Cust. part No.	:	tolerance mm : + 0.10
Customer-spec. in	formation .	Rack travel in mm : 10.50
Customer Motor	: IVECO-FRANCE : 8215.22.400	Firing order : 1-5-3-6-2- : 4
TEST BENCH REQUIR	EMENTS -	+ Phasing : 0-60-120-180-240 : -300
Inlet line	: 4.2	Tolerance : + 0.30
Test oil inlet temp. °C	: 40 : + 2.0	tolerance °NW : + 0.75
Tolerance °C	: +- 2.0	BASIC SETTING
Overflow valve	: 1 417 413 025	Rated speed rpm : 1000
Inlet press. bar	: 1.5	Rack travel in mm : 14.65 Tolerance mm : +- 0.05
Test nozzle holde assembly	: 1 688 901 019	Del. quantity cm3/1000 strokes : 218.0
Opening pressure bar	: 208.5	Tolerance cm3/1000 strokes : +- 1.0
Tolerance bar	: +- 1.5	Check tolerance cm3/1000s. : +- 4.0
Test lines Outside diameter	-	Spreed Tolerance cm3/1000 strokes : 5.0
outs ar and the	1	

Check tolerance	+	rack travel mm	
cm3/1000s.	: 9.0	Rated speed rpm Tolerance 1/min	
Del. quantity	I	. Toterance triitin	: — 15
cm3/1000 strokes	: 28.0	rack travel mm	: 0.50
Tolerance	· +	Tolerance mm	: - 0.50
cm3/1000 strokes	: + 3.0	Rated speed rpm	: 1250
Check tolerance cm3/1000s.	: + 6.0		
Spreed	1		
Tolerance	+	LOW IDLE	
cm3/1000 strokes	: 8.0 +	•	
Check tolerance cm3/1000s.	: 12.0	control lever	
CIIDA 18885.	12.0	position degree	: 79.0
	1	tolerance degree	
(B) SETTING OF IN	JECTION PUMP +		
WITH GOVERNOR	†	Testing:	
	I	Rated speed rpm	: 375
		rack travel mm	7.30
GUIDE SLEEVE POSI	TION +	Tolerance mm	: ← 0.10
Detect aread are	. 1110	Detect speed non-	. 700
Rated speed rpm	: 1110	Rated speed rpm	: 300
Rack travel in mm	: 13.20	CRT mm min.	: > 9.50
Tolerance mm	A 1		
	†	Rated speed rpm	: 440
FULL LOAD DELIVER	Y AT FULL LOAD STOP		
TOLL LOND DELIVER	1 AT TOLL COND OTO	TORQUE CONTROL	
	T-	I OUGOE COMILION	
Rated speed rpm	: 1000		
Aneroid pressure	+	Rated speed rpm	
Aneroid pressure hPa	: 1000 : 700	Rated speed rpm rack travel mm	: 14.65
Aneroid pressure hPa Del. quantity	: 700	Rated speed rpm	: 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	: 700 : 218.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 14.65 : + 0.05 : 750
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 700 : 218.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 14.65 : ← 0.05 : 750 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 700 : 218.0 : + 1.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 14.65 : + 0.05 : 750
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 218.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 14.65 : ← 0.05 : 750 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 700 : 218.0 : + 1.0 : + 4.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 14.65 : ← 0.05 : 750 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 700 : 218.0 : + 1.0 : + 4.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 14.65 : ← 0.05 : 750 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 14.65 : ← 0.05 : 750 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 700 : 218.0 : + 1.0 : + 4.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST	: 14.65 : ← 0.05 : 750 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65 : + 0.05
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65 : + 0.05
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree RATED SPEED rack travel mm Rated speed rpm	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : 105.0 : + 4.0 : 13.60 : 1045	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65 : + 0.05
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. CONTROL LEVER control lever position degree tolerance degree RATED SPEED rack travel mm	: 700 : 218.0 : + 1.0 : + 4.0 : 5.0 : 9.0 : + 4.0 : 13.60	Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 14.65 : + 0.05 : 750 : 14.65 : + 0.10 : 500 : 700 : 14.65 : + 0.05

Pressure nPa	;	200
rack travel mm	:	12.40
Tolerance mm	; +-	0.20
Pressure hPa	;	260
rack travel mm	;	13.45
Tolerance mm	: +-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		
hPa	:	700
Rated speed rpm	:	700
Del. quantity		
cm3/1000 strokes	:	226.5
Tolerance		
cm3/1000 strokes	: +-	3.0
Charle dalamana		

Check tolerance			
cm3/1000s.	:	+-	6.0

Aneroid pressure	•	_
111 44	•	
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	155.0
Tolerance		
cm3/1000 strokes	: +	- 1.0
Check tolerance		
cm3/1000s.	: +	- 4.0
Spreed		
Check tolerance		
	_	0.0
cm3/1000s.	:	8.0

BREAKAWAY

Rack travel in mm	:	13.60
Rated speed rpm	:	1045
Tolerance 1/min	:	+- 5

STARTING FUEL DELIVERY

Rated speed rpm	:	100
Del. quantity		
cm3/1000 strokes	:	260.0
Tolerance		
cm3/1000 strokes	: +-	15.0
Check tolerance		
cm3/1000s.	: +-	19.0

LOW IDLE

Del. quantity			
cm3/1000 strokes	:	28.0	
Tolerance			
cm3/1000 strokes	: +-	3.0	
Check tolerance			
cm3/1000s.	: +-	6.0	
Spreed	-	• • •	
Tolerance			
cm3/1000 strokes	•	8.0	
Check tolerance	•	0.0	
cm3/1000s.	•	12.0	
(1137 10003.	•	12.0	

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.01.96 Test oil : ISO 4113

Combination No. : 0 402 746 949

Injection pump

Pump designation : PES6P120A720RS7224

: -2

EP type number : 0 412 726 893

Governor

Governer design. : RQV275...1100PA975

: -3K

Governer no. : 0 421 815 350

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41.406

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15

Tolerance mm : + 0.05

Check

tolerance mm : \div 0.10

Rack travel in mm: 10.50
Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

: -300 Tolerance : + 0.30

Check

tolerance "NW : +- 0.50

Start of delivery mark

Check

tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.75

Tolerance mm : \leftarrow 0.05

Del. quantity	+	guide sleeve
cm3/1000 strokes :	218 0	travel mm : 13.50
CIID/1000 Strokes .	210.0	
-		Tolerance mm : +- 0.50
Tolerance	†	
cm3/1000 strokes :	+ 1.0 +	
_	<u> </u>	GUIDE SLEEVE POSITION
Check tolerance	+	
	+ 4.0	Rated speed rpm : 1235
	1	Nated Speed (pill : 1205
Canad .		Dock though in mm . 10 70
Spreed	T	Rack travel in mm: 10.30
Tolerance	+	Tolerance mm : + 2.50
cm3/1000 strokes :	5.0	
_		
Check tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. :	9.0	
CHD/100001	1.0	Rated speed rpm : 1100
Dated available	775	
Rated speed rpm :	275	Aneroid pressure
	†	hPa : 1200
	5.30 +	Del. quantity
Tolerance mm :	+ 0.20 +	cm3/1000 strokes : 218.0
Del. quantity	1	Tolerance
cm3/1000 strokes :	30.0	cm3/1000 strokes : +- 1.0
Tolerance	30.0	Check tolerance
	+ 3.0 I	****
cm3/1000 strokes :	+ 3.0 +	
Check tolerance		Spreed
cm3/1000s. :	+ 6.0	Tolerance
Spreed	+	cm3/1000 strokes : 5.0
Tolerance	1	Check tolerance
cm3/1000 strokes :	an 1	cm3/1000s. : 9.0
Check tolerance	0.0	CIII37 10003 7.0
	12 O	
cm3/1000s. :	12.0	
	+	
	+	CONTROL LEVER
(B) SETTING OF INJECT	TION PUMP +	
WITH GOVERNOR	-	control lever
	1	position degree : 120.0
		tolerance degree : + 4.0
CHARE OF FELLE TRAVEL		toterance degree . +- 4.0
GUIDE SLEEVE TRAVEL	Ť	D.T. 00500
	<u> </u>	RATED SPEED
Rated speed rpm :	275	
guide sleeve		
	+	rack travel mm : 11.70
travel mm :	1.90	
travel mm :	1.90	Rated speed rpm : 1160
travel mm : Tolerance mm :	1.90 + 0.20	
Tolerance mm :	+ 0.20	Rated speed rpm : 1160 Tolerance 1/min : ← 5
Tolerance mm : Rated speed rpm :		Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00
Tolerance mm : Rated speed rpm : guide sleeve	+ 0.20 + 1145 +	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245
Tolerance mm : Rated speed rpm :	+ 0.20 + 1145 + 10.40	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00
Tolerance mm : Rated speed rpm : guide sleeve	+ 0.20 + 1145 +	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245
Tolerance mm : Rated speed rpm : guide sleeve travel mm :	+ 0.20 + 1145 + 10.40	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5 \) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15 \)
Rated speed rpm : guide sleeve travel mm : Tolerance mm :	+ 0.20 1145 10.40 + 0.15	Rated speed rpm : 1160 Tolerance 1/min : rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : rack travel mm : 0.50
Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm :	+ 0.20 + 1145 + 10.40	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5\) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15\) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50\)
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve	+ 0.20 1145 10.40 + 0.15 750	Rated speed rpm : 1160 Tolerance 1/min : rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : rack travel mm : 0.50
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm :	+ 0.20 1145 10.40 + 0.15 750 6.10	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5\) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15\) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50\)
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm :	+ 0.20 1145 10.40 + 0.15 750	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5\) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15\) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50\)
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : Tolerance mm : Tolerance mm :	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm :	+ 0.20 1145 10.40 + 0.15 750 6.10	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5\) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15\) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50\)
Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm : Rated speed rpm :	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : Rated speed rpm : Rated speed rpm : guide sleeve : Rated speed rpm : guide sleeve	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25 430	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : guide sleeve travel mm : guide sleeve travel mm : guide sleeve travel mm :	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25 430 3.60	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5 \) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15 \) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50 \) Rated speed rpm : 1350 LOW IDLE
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : Rated speed rpm : Rated speed rpm : guide sleeve : Rated speed rpm : guide sleeve	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25 430	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5 \) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15 \) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50 \) Rated speed rpm : 1350 LOW IDLE control lever
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : T	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25 430 3.60 + 0.25	Rated speed rpm : 1160 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE control lever position degree : 74.0
Rated speed rpm : guide sleeve travel mm : Tolerance mm : Rated speed rpm guide sleeve travel mm : Tolerance mm : Rated speed rpm : guide sleeve travel mm : guide sleeve travel mm : guide sleeve travel mm : guide sleeve travel mm :	+ 0.20 1145 10.40 + 0.15 750 6.10 + 0.25 430 3.60	Rated speed rpm : 1160 Tolerance 1/min : \(\sim 5 \) rack travel mm : 4.00 Rated speed rpm : 1245 Tolerance 1/min : \(\sim 15 \) rack travel mm : 0.50 Tolerance mm : \(\sim 0.50 \) Rated speed rpm : 1350 LOW IDLE control lever

Te	sti	ng
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275 Rated speed rpm 5.30 rack travel mm 0.10 Tolerance mm

100 Rated speed rpm

CRT mm min. : > 7.00

Rated speed rom 335

TORQUE CONTROL

Rated speed rpm 1100 12.75 rack travel mm : + 0.05Tolerance mm

Rated speed rpm 900 rack travel mm 12.75 Tolerance mm : + 0.10

Rated speed rpm 650 rack travel mm 12.00 : ← 0.10 Tolerance mm

300 Rated speed rpm 11.20 rack travel mm Tolerance mm : +- 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 900 1200 Pressure hPa 12.75 rack travel mm : +- 0.05 Tolerance mm

MEASUREMENT

H28

Pressure hPa 900 Rated speed rpm 7.50 rack travel mm Tolerance mm : ÷- 0.20

900 Rated speed rpm

380 Pressure hPa 9.00 rack travel mm Tolerance mm : +- 0.20

710 Pressure hPa 11.50 rack travel mm : +- 0.05 Tolerance mm

START CUT-OUT

170 Rated speed rpm : > Rated speed rpm : < 220

Check

150 speed 1/min : > Check

speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1200 Rated speed rpm 900 Del. quantity

cm3/1000 strokes : 231.0

Tolerance

cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +- 6.0

Aneroid pressure

1200 hPa 650 Rated speed rom

Del. quantity 238.0

cm3/1000 strokes : Tolerance

3.0 cm3/1000 strokes Check tolerance

cm3/1000s. 6.0

Aneroid pressure

650 Rated speed rpm

Del. quantity cm3/1000 strokes :

126.0 Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.4.0

BREAKAWAY

11.70 Rack travel in mm : Rated speed rpm : Tolerance 1/min

STARTING FUEL DELIVERY

100 Rated speed rpm Del. quantity cm3/1000 strokes : 140.0

Tolerance		
cm3/1000 strokes	: +-	15.0
Check tolerance		
cm3/1000s.	: +-	19.0

LOW IDLE

Rated speed rpm rack travel mm Tolerance mm	: +-	275 5.30 0.20	
Del. quantity cm3/1000 strokes	:	30.0	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s.	: +-	6.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.12.94 Test oil : ISO 4113

Combination No. : 0 402 746 949A

Injection pump

Pump designation : PES6P120A720RS7224

: -2

EP type number : 0 412 726 893

Governor

Governer design. : RQV275...1100PA975

: -3K

Governer no. : 0 421 815 350

Cust. part No.

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41.406

Power KW : 253.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

• 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance "NW : +- 0.50

Start of delivery mark

Check

tolerance *NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.75
Tolerance mm : + 0.05

	+	Rated speed rpm	: 1350
Del. quantity	+	guide sleeve	
cm3/1000 strokes :	195.0	travel mm	: 13.50
		Tolerance mm	: +- 0.50
Tolerance	†		
cm3/1000 strokes : +-	1.0	OUTDE OF SELECTION	
Obselv de Lamoure		GUIDE SLEEVE POSI	ITON
Check tolerance	10	Detect annual com-	. 4225
cm3/1000s. : +-	4.0	Rated speed rpm	: 1225
Spreed	I	Rack travel in mm	: 10.00
Tolerance	I	Tolerance mm	: + 1.30
cm3/1000 strokes :	5.0	10cci di 10c disir	
	1	~	
Check tolerance	+	FULL LOAD DELIVER	Y AT FULL LOAD STOP
cm3/1000s. :	9.0		
	+	Rated speed rpm	: 1100
Rated speed rpm :	275 +	Aneroid pressure	
	+	hPa	: 1200
Rack travel in mm :	5.50	Del. quantity	445 6
Tolerance mm : +-	0.20	cm3/1000 strokes	: 195.0
Del. quantity	7	Tolerance	4.0
cm3/1000 strokes :	26.0	cm3/1000 strokes	: +- 1.0
Tolerance cm3/1000 strokes : +-	3.0	Check tolerance cm3/1000s.	: +- 4.0
Check tolerance	3.0 I	Spreed	. +- 4.0
cm3/1000s. : +-	6.0	Tolerance	
Spreed	1	cm3/1000 strokes	: 5.0
Tolerance	1	Check tolerance	
cm3/1000 strokes :	8.0	cm3/1000s.	: 9.0
Check tolerance	+		
cm3/1000s. :	12.0		
	+		
	+	CONTROL LEVER	
(B) SETTING OF INJECTION	Y PUMP +		
WITH GOVERNOR	+	control lever	440.0
	†	position degree	
CUIDE OF FEUE TOAVE		tolerance degree	: +- 4.0
GUIDE SLEEVE TRAVEL	Ī	RATED SPEED	
Rated speed rpm : 2	275	KATED SPEED	
guide sleeve	1	rack travel mm	: 10.70
travel mm :	2.00	Rated speed rpm	: 1145
Tolerance mm : +-		Tolerance 1/min	: +- 5
	+		
Rated speed rpm : 11	155	rack travel mm	: 4.00
guide sleeve	+	Rated speed rpm	: 1215
	10.55	Tolerance 1/min	: - 15
Tolerance mm : +-	0.15		0.50
	.,,	rack travel mm	: 0.50
	764 +	Tolerance mm	: + 0.50
guide steeve	6.24	Rated speed rpm	: 1350
	0.25		
Tolerance mm : +-	I		
Rated speed rpm : 4	30 I	LOW IDLE	
guide sleeve	1		
	3.63		
	0.25	control lever	
	+	position degree	: 66.0
	•		

tolerance degree : + 4.0 Testing: Rated speed rom 275 5.50 rack travel mm Tolerance mm : + 0.10100 Rated speed rom : > 6.70 CRT mm min. Rated speed rpm 300 • TORQUE CONTROL Rated speed rpm 1100 11.75 rack travel mm : **←** 0.05 Tolerance mm 800 Rated speed rpm 11.75 rack travel min : Tolerance mm : + - 0.10500 Rated speed rpm : 10.95 rack travel mm • Tolerance mm : + 0.15350 Rated speed rpm : 11.40 rack travel mm : + 0.20Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 1100 Pressure hPa 1200 11.75 rack travel mm : +- 0.05 Tolerance mm **MEASUREMENT** 1100 Rated speed rpm 360 Pressure hPa 8.70 rack travel mm : +- 0.20 Tolerance mm 600 Pressure hPa rack travel mm 10.85 : +- 0.05 Tolerance mm START CUT-OUT

Rated speed rpm : > 170 : < Rated speed rpm 220 Check speed 1/min : > 150 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure 1200 500 Rated speed rpm Del. quantity cm3/1000 strokes : 220.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 : +-Aneroid pressure 500 Rated speed rpm Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes 1.0 : +-Check tolerance cm3/1000s. 4.0 : +-BREAKAWAY Rack travel in mm : 10.70 Rated speed rpm : Tolerance 1/min STARTING FUEL DELIVERY Rated speed rpm 100 Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +- 15.0Check tolerance cm3/1000s. : + 19.0LOW IDLE

275 Rated speed rpm 5.50 rack travel mm Tolerance mm 0.20

Del. quantity		
cm3/1000 strokes	:	26.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.01.96 Test oil : ISO 4113

Combination No. : 0 402 746 950

Injection pump

Pump designation : PES6P120A720RS7224

: -5

EP type number : 0 412 726 893

Governor

Governer design. : RQV275...1100PA975

: -4K

Governer no. : 0 421 815 351

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41.320

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Check

tolerance °NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.45
Tolerance mm : + 0.05

Del. quantity + cm3/1000 strokes : 192.0 +	guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : + 1.0	
	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1235
Spreed	Rack travel in mm : 10.30 Tolerance mm : +- 2.50
cm3/1000 strokes : 5.0	roter drice tight
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 275	Rated speed rpm : 1100 Aneroid pressure
Rack travel in mm: 5.70 +	hPa : 1200 Del. quantity
Tolerance mm : + 0.20	cm3/1000 strokes : 192.0
Del. quantity tm3/1000 strokes : 30.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance + 3.0 +	Check tolerance cm3/1000s. : +- 4.0
Check tolerance + 6.0 +	Spreed Tolerance
Spreed	cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 12.0	
†	CONTROL LEVER
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR	control lever
<u>†</u>	position degree : 120.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	_
Rated speed rpm : 275	RATED SPEED
guide sleeve	rack travel mm : 10.40
travel mm : 1.90 +	Rated speed rpm : 1170
Tolerance mm : + 0.20	Tolerance 1/min : +- 5
Rated speed rpm : 1145	rack travel mm : 4.00
guide sleeve travel mm : 10.40	Rated speed rpm : 1240 Tolerance 1/min : +- 15
Tolerance mm : + 0.15	roterance minima.
	rack travel mm : 0.50
Rated speed rpm : 750	Tolerance mm : + 0.50
guide sleeve + travel mm : 6.10 +	Rated speed rpm : 1350
Tolerance mm : + 0.25	
Rated speed rpm : 430	LOW IDLE
guide sleeve + travel mm : 3.60 +	
Tolerance mm : + 0.25	control lever
Rated speed rpm : 1360	position degree : 73.0 tolerance degree : +- 4.0

Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.70 : + 0.10
Rated speed rpm	: 100
CRT mm min.	: > 7.20
Rated speed rpm	: 335
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 650 : 10.20 : + 0.15
Rated speed rpm rack travel mm Tolerance mm	: 400 : 9.60 : +- 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 11.45 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 7.80 : +- 0.20
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 340 : 8.70 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 570 : 10.55 : +- 0.05

## START CUT-OUT Rated speed rpm : > 170 Rated speed rpm : < 220 Check ## speed 1/min : > 150 Check ## speed 1/min : < 240 ## Speed 1/min : < 240 ## FUEL DELIVERY CHARACTERISTICS Aneroid pressure ## hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure ## : 1200 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure ##		
Check speed 1/min : > 150 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 650 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s trokes : + 1.0	START CUT-OUT	
Speed 1/min : > 150 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 126.0 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	Rated speed rpm Rated speed rpm	: > 170 : < 220
FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : 4.0 Aneroid pressure hPa : 1200 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	speed 1/min	: > 150
Aneroid pressure hPa : 1200 Rated speed rpm : 900 Del. quantity cm3/1000 strokes : 189.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : 1200 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 185.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		: < 240
## 1200 ## Rated speed rpm : 900 ##	FUEL DELIVERY CHA	RACTERISTICS
## 1200 ## Rated speed rpm : 900 ##	Ananaid proceurs	
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cm3/1000s. : + 6.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	cm3/1000 strokes	: +- 3.0
Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		40
hPa Rated speed rpm: 650 Del. quantity cm3/1000 strokes: 126.0 Tolerance cm3/1000 strokes: +- 1.0 Check tolerance cm3/1000s.: +- 4.0 BREAKAWAY Rack travel in mm: 10.40 Rated speed rpm: 1170 Tolerance 1/min: +- 5 STARTING FUEL DELIVERY Rated speed rpm: 100 Del. quantity	CHIS/ (UUUS.	: 0.0
Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		
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cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		: 650
Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		: 126.0
Check tolerance cm3/1000s. : + 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	Tolerance	
cm3/1000s. : +- 4.0 BREAKAWAY Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		: +- 1.0
Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		: +- 4.0
Rack travel in mm : 10.40 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity		
Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	BREAKAWAY	
Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	Rack travel in mm	: 10.40
Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity	Rated speed rpm	: 1170
Rated speed rpm : 100 Del. quantity	Tolerance 1/min	: +- 5
Rated speed rpm : 100 Del. quantity	OTANTAIN FUT	
Del. quantity	STARTING FUEL DELI	LVERY
		: 100
im iz zinai striuc≥s ' (ΔΗ Η		. 1/0 0
(m) 1000 301 0RC3 . 140.0	umo/ tudu strokes	: 140.0

Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

275 Rated speed rpm 5.70 rack travel mm Tolerance mm 0.20 Del. quantity cm3/1000 strokes 30.0 Tolerance cm3/1000 strokes 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.11.94 Test oil : ISO 4113

Combination No. : 0 402 746 950A

Injection pump

Pump designation : PES6P120A720RS7224

: -2

EP type number

Governor

Governer design. : RQV275...1100PA975

: -4K

Governer no. :

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41.320

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance 'NW : +- 0.50

Start of delivery mark

Check

tolerance °NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.65
Tolerance mm : + 0.05

	+	Rated speed rpm	: 1100
Del. quantity cm3/1000 strokes :	168.0	Aneroid pressure	: 1200
Tolerance cm3/1000 strokes :	+ 1.0	Del. quantity cm3/1000 strokes Tolerance	: 168.0
Check tolerance		cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s. :	+ 4.0	cm3/1000S. Spreed	: +- 4.0
Spreed Tolerance	‡	Tolerance cm3/1000 strokes	; 5.0
cm3/1000 strokes :	5.0	Check tolerance cm3/1000s.	: 9.0
Check tolerance cm3/1000s. :	9.0		
(B) SETTING OF INJE	ECTION PUMP	CONTROL LEVER	
WITH GOVERNOR		control lever position degree tolerance degree	
GUIDE SLEEVE TRAVEL	• ‡	RATED SPEED	
Rated speed rpm : guide sleeve	275	rack travel mm	: 10.30
travel mm :	1.90	Rated speed rpm	
	+ 0.20	Tolerance 1/min	: +- 5
	1145	rack travel mm	: 4.00
guide sleeve	10.40	Rated speed rpm	: 1235
travel mm : Tolerance mm :	10.40 + 0.15	Tolerance 1/min	: + 15
Rated speed rpm :	750 +	rack travel mm Tolerance mm	: 0.50 : +- 0.50
guide sleeve	1	Rated speed rpm	: 1350
travel mm :	6.10		
Tolerance mm :	+- 0.25		
Rated speed rpm : guide sleeve	430	LOW IDLE	
travel mm :	3.60 ↓		
	+ 0.25	control lever	
	+	position degree	
Rated speed rpm : guide steeve	1360	tolerance degree	: +- 4.0
travel mm :	13.50	Testing:	
Tolerance mm :	+ 0.50 +		
	+	Rated speed rpm	
		rack travel mm	: 5.30
GUIDE SLEEVE POSITION	UN	Tolerance mm	: +- 0.10
Rated speed rpm :	1235	Rated speed rpm	: 100
Rack travel in mm : Tolerance mm :		CRT mm min.	: > 6.80
. Octor drive that		Rated speed rpm	: 335
FULL LOAD DELIVERY	AT FULL LOAD STOP		
	+	TORQUE CONTROL	

Rated speed rpm rack travel mm Tolerance mm	: 1100 : 10.65 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 9.50 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 900 : 10.20 : + 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1100 : 1200 : 10.65 : + 0.05
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 420 : 8.40 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 600 : 10.05 : + 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 170 : < 220
Check speed 1/min	: > 150
Check speed 1/min	: < 240
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: 1200 : 700
Del. quantity cm3/1000 strokes	: 163.0
Tolerance cm3/1000 strokes	: 3.0
Check tolerance cm3/1000s.	: +- 6.0

Aneroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 118.0 Tolerance cm3/1000 strokes : + 1.0Check tolerance cm3/1000s. : +- 4.0 BREAKAWAY Rack travel in mm : 10.30 Rated speed rpm : 1170 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 15.0Check tolerance cm3/1000s. : **←** 19.0

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : SOF Edition : 21.03.96

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/10F2000R697 Type number : 0 460 404 088

Customer Part-No. :

Customer—specific information Customer : IVECO—SOFIM

Engine : 8140.67.2585

Power KW: 60

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer>: 40.00...48.00 Electronically>: 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 127.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Prestroke mm: 0.2

> (from BDC): +-0.02(0.04)

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1200

Setting value mm: 2.10...2.30

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Setting value bar: 6.00...6.60

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1200

Del. quantity cm3/

> 1000s.: 42.00...43.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 > 10008:: (2.5)

Low-idle speed regulation

Speed 1/min: 375

Del. quantity cm3/

> 1000s.: 12.00...16.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.5 > 1000S.: (2.5)

Full-load speed regulation

Speed 1/min: 2300

Del. quantity cm3/

> 1000s.: 23.00...27.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 70.00...110.00

mind> 1000s.: 70.00

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1200 Charge press hPa: 12

Inj.-qty. cm3/

difference> 1000S.: -15.0...21.0 *

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

1.Speed 1/min: 1200

TD-travel

difference mm: -0.7...0.9 *

Shutoff

electromagnet>Volt: 12

Inspection pump test specifications	- Shutoff
Test specifications in parentheses	electromagnet>Volt: 12
-	Del. quantity cm3/: 0.003.00
Timing-device characteristic:	> 1000s.: -
	2nd speed 1/min: 2400
1st speed	Shutoff
TD travel mm: 2.102.30	electromagnet Volt: 12
> mm: (1.602.80)	Del. quantity cm3/: 5.015.0
electromagnet>Volt: 12	> 1000s.: -
2nd speed 1/min: 1800	3rd speed 1/min: 2300
TD travel mm: 6.006.60 -	Shutoff
> mm: (5.607.00) -	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 23.027.0
electromagnet>Volt: 12	> 1000s.: (19.031.0)
3rd speed 1/min: 1600	4th speed
TD travel mm: 4.505.30	Shutoff
> mm: (4.205.60)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 39.542.5
electromagnet>Volt: 12	> 1000s.: (38.543.5)
4th speed 1/min: 2100	5th speed
TD travel mm: 7.007.80	Shutoff
> mm: (6.708.10)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 40.5043.50
electromagnet>Volt: 12	> 1000s.: (39.5044.50)
e feet i diid Ai lets Aoff. 15	- 6th speed 1/min: 1200
Cumply-numb anagguna shannataniatics	- Shutoff
Supply-pump pressure characteristic:	
4-h (00	electromagnet>Volt: 12
1st speed 1/min: 600	Del. quantity cm3/: 42.043.0
Supply-pump +	> 1000s.: (40.544.5)
pressure> bar: 4.104.70	7th speed 1/min: 600
Shutoff	- Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
2nd speed 1/min: 1200	- Del. quantity cm3/: 36.040.0
Supply-pump -	- > 1000s.: (35.041.0)
pressure> bar: 6.006.60	-
Shutoff	
electromagnet>Volt: 12	
3rd speed 1/min: 2100	- Electr. shutoff:
Supply-pump +	
pressure> bar: 8.509.10	- 1st speed 1/min: 375
Shutoff	- Del. quantity cm3/: 0.003.00
electromagnet>Volt: 12	- > 1000s.: (0.003.00)
etectionagnets votes ve	- Shutoff
Overlow quantity at overflow valve:	- electromagnet>volt: -
overtow quantity at overitow valve.	etetti ollagi letzvott.
1st speed 1/min: 600	- - Idle delivery:
	- late detivery:
Shutoff	4
electromagnet>Volt: 12 +	- 1st speed 1/min: 375
Overflow : 41.7086.10	- Shutoff
quantity> cm3/10s: (26.70101.10)	
2nd speed 1/min: 2100 +	electromagnet>Volt: 12
	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00
Shutoff +	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00)
electromagnet>Volt: 12	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5
electromagnet>Volt: 12 + Overflow : 55.60139.00 +	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5 > 1000s.: (2.5)
electromagnet>Volt: 12	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5
electromagnet>Volt: 12 + Overflow : 55.60139.00 +	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5 > 1000s.: (2.5)
electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5 > 1000s.: (2.5) 2nd speed 1/min: 465
electromagnet>Volt: 12 + Overflow : 55.60139.00 +	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5 > 1000s.: (2.5) 2nd speed 1/min: 465 Shutoff
electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 1000s.: (9.0019.00) Dispersion cm3/: 2.5 1000s.: (2.5) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12
electromagnet>Volt: 12 Overflow : 55.60139.00 quantity> cm3/10s: (40.60154.00)	electromagnet>Volt: 12 Del. quantity cm3/: 12.0016.00 > 1000s.: (9.0019.00) Dispersion cm3/: 2.5 > 1000s.: (2.5) 2nd speed 1/min: 465 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.003.00

Load-dependent start of delivery: electromagnet>Volt: 12 Inj.-qty.dif.measurement: Del. quantity cm3/: 70.00...110.00 1000s.: (70.00...110.00) 1/min: 1200 1st speed Inj.-qty. cm3/ : -13.0..15.0 # Shutoff electromagnet: difference> 1000s.: -Shutoff Cut-in electromagnet>Volt: 12 >min voltage : 10.0 2nd speed 1/min: 1200 Rated voltage : 12.0 cm3/: 0.00...3.00 " Inj.-qty. difference> 1000s.: -Mounting and assembly dimensions: Shutoff electromagnet Volt: 12 KF mm: 5.6...6.0 MS mm: 1.6...2.0 TD-travel dif.measurement: FH mm: KSB 10.0 correttore anticipo iniezione (SV): mm: 9.0 TLA-E 1st speed 1/min: 1200 XK mm: SPALTMAB TD-travel : -0.6...1.4 " XL mm: A = 0.8..3.0difference> Ya mm: 42.9...44.9 mm: -Shutoff Yb mm: 36.0...44.0 electromagnet>Volt: 12 Remarks: SP press.—dif.measurement: : pompa di mandata (FP): 1st speed 1/min: 1200 Ya = Distance between VE flange and Supply pumpspeed-control lever in idle pressure > : -0.1...0.3 # position difference> Measurement point = edge of control bar: lever on drive end Shutoff electromagnet>Volt: 12 Part-load del.at 3rd inj.-qty. Yb = Distance between VE flange and speed-control lever in rated speed terza fermo della portata stop (EGR set) position scarico) (ARF) Measurement point = edge of control gaz d'échappement-ARF) lever on distributor-head end mm: 12.0 Spacing 1/min: 1200 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 31.0...32.0 1000s.: (29.0...34.0) Automatic starting fuel delivery: 1/min: 300 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.00...85.00 1000s.: (55.00...85.00) 1/min: 500 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 25.00...45.00 1000s.: (25.00...45.00) 1/min: 100 4th speed

Shutoff

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

: FOR Test scheet

Edition : 12.02.96

replaces :

Calibrating oil : ISO-4113

Injection pump : VE4/11F2000R624-1

: 0 460 414 123 Type number

Customer Part-No. :

Customer-specific information : FORD SWISS Customer

Engine : 2.5L DI

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 44.00...46.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 114 assembly>

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.4

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery block Piston stroke mm: 0.52 mm: +-0.05

: B Outlet >

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 2.60...2.80

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250

Setting value bar: 7.10...7.70

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

1/min: 500 Speed

Del. quantity cm3/

1000s.: 28.30...28.70 F >

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 425

Del. quantity cm3/

1000s.: 9.00...11.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.0 1000s.: (4.0)

Full-load speed regulation

1/min: 2200 Speed

Del. quantity cm3/

1000s.: 25.00...27.00

Shutoff

electromagnet>Volt: 12 cm3/: 3.0 1000s.: (4.0) Dispersion

Start:

1/min: 100 Speed

Del. quantity cm3/: 35.00...65.00

1000s.: 45.00 mind>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 1000 1st speed

TD travel mm: 1.10...1.90 mm: (0.60...2.40)

electromagnet>Volt: 12 2nd speed

1/min: 1250 mm: 2.60...2.80 TD travel mm: (2.10...3.30)

Shutoff

electromagnet>Volt: 12 1/min: 2000 3rd speed

TD travel mm: 5.60...6.40

	(3.100.30)	Silutori
Shutoff	+	electromagnet>Volt: 12
electromagnet>Volt:	12 +	Del. quantity cm3/: 25.0027.00
3 .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	> 1000s.: (21.0031.00)
- 1	T	
Supply-pump pressur	e characteristic: +	6th speed 1/min: 1700
	1	Shutoff
Ant annual Almana	500	
1st speed 1/min:	700 +	electromagnet>Volt: 12
Supply-pump	+	Del. quantity cm3/: 39.842.2
pressure> bar:	5.406.00	> 1000s.: (37.542.5)
•	3.400.00	
Shutoff	+	7th speed 1/min: 1150
electromagnet>Volt:	12 +	Shutoff
2nd speed 1/min:	1150	electromagnet>Volt: 12
	T 170	
Supply-pump	+	Del. quantity cm3/: 35.536.5 E
pressure> bar:	6.907.50	> 1000s.; (33.5,38.5) E
Shutoff		8th speed 1/min: 500
	T	
electromagnet>Volt:	12 +	Shutoff
3rd speed 1/min:	1250 +	electromagnet>Volt: 12
	1230	
Supply-pump	T T	Del. quantity cm3/: 28.3028.70
pressure> bar:	7.107.70	> 1000s.: (25.5031.50)
Shutoff	1	
	10	
electromagnet>Voit:		
4th speed 1/min:	2000 +	
	1	Electr. shutoff:
Supply-pump	T	Electr. Shutoff.
pressure> bar:	8.709.30	
Shutoff	1	1st speed 1/min: 425
	13	
electromagnet>Volt:	16	Del. quantity cm3/: 0.003.00
	+	> 1000s.: (0.003.00)
Overlow quantity at	overflow valve:	Shutoff
over tow qualitity at	Over I cow vacve.	
	†	electromagnet>volt: -
1st speed 1/min:	500 +	
Shutoff		Idle delivery:
	T	Tate detivery.
electromagnet>Volt:	12 +	
Overflow :	97.30141.70	1st speed 1/min: 425
		Shutoff
quantity> cm3/10s:		
2nd speed 1/min:	1950 +	electromagnet>Volt: 12
Shutoff	1	Del. quantity cm3/: 9.0011.00
	43	
electromagnet>Volt:	12	15000:: (0:00:::14:00)
Overflow :	115.30184.80	Dispersion cm3/: 3.0
quantity> cm3/10s:	(100 30 100 80)	> 1000s.: (4.0)
quality cliby 105.	T	
	+	2nd speed 1/min: 500
Delivery-quant. and	breakaway char: +	Shutoff
rottion, qualitation and	1	electromagnet>Volt: 12
	T	
	+	Del. quantity cm3/: 0.006.00
1nd speed 1/min:	1950	> 1000s.: (0.006.00)
	7.2	
	7.6	
Shutoff	+	Part-load del.at 3rd injqty.
electromagnet>Volt:	12	terza fermo della portata
Del. quantity cm3/:		stop (EGR set)
> 1000s.:	(39.044.0) D +	scarico) (ARF)
		gaz d'échappement-ARF)
	T	
Shutoff	+	Spacing mm: 20.0
electromagnet Volt:	12	
Dol guantity and/	0.00 5.00	1st speed 1/min: 1250
Del. quantity cm3/:		
> 1000s.:	- +	Shutoff
3rd speed 1/min:		electromagnet>Volt: 12
•		
Shutoff	+	Del. quantity cm3/: 22.0023.00
electromagnet>Volt:	12 +	> 1000s.: (20.0025.00)
Del. quantity cm3/:		
		Action and a manufacture street street
	(6.0018.00) +	Automatic starting fuel delivery:
4th speed 1/min:	2200 +	
	•	

1st speed 1/min: 300

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 33.00...63.00

> 1000s.: -

2nd speed 1/min: 480 Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 20.00...32.00

> 1000s.: -

4th speed 1/min: 100

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 40.00...65.00

> 1000s.: -

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: 2.7...2.9
KF mm: KOT
MS mm: 1.6...2.0

HBA stroke mm: 7.2

Ya mm: 41.0...44.0 Yb mm: 63.0...75.0

Remarks:

:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position

Measurement point = edge of control lever on distributor-head end

Always pay attention to test instructions for DISTRIBUTOR-TYPE INJECTION PUMPS FOR DI ENGINES!

Information additionally required for testing fuel-injection pump:

TEST PREREQUISITES

Calibrating-oil return temperature with

thermometer, °C :4

Calibrating-oil inlet

temperature, °C :35...40

Dwell speed, 1/min :1100 Feedback voltage, mV :-

SETTINGS/TEST SPECIFICATIONS FOR FUEL-INJECTION PUMP, delivery rates

Test speed, 1/min :<500

Temperature stabilisation

speed 1/min :2200 Output temperature, °C :51 Measurement temperature, °C:49

Test speed, 1/min :500...799

Temperature stabilisation

speed 1/min :2200 Output temperature, °C :48 Measurement temperature, °C:46

Test speed, 1/min :800...1199

Temperature stabilisation

speed 1/min :2200/100

Output temperature, °C :45
Measurement temperature, °C:45

Test speed, 1/min :1200...1700

Temperature stabilisation

speed 1/min :100 Output temperature, °C :42 Measurement temperature, °C:44

Test speed, 1/min :>1700

Temperature stabilisation

speed 1/min :100 Output temperature, °C :41 Measurement temperature, °C:43

Charge press. hPa: 1200 Setting value mm: 3.10...3.30 BOSCH-INJ.-PUMP TEST SPECIFICATIONS Shutoff Note inst. in remarks column electromagnet>Volt: 12 : MAX Supply-pump pressure Test scheet : 14.03.96 Edition 1/min: 1600 Speed replaces : -Charge press hPa: 1200 Calibrating oil : ISO-4113 Setting value bar: 7.30...7.90 : VE4/11F1900R653 Shutoff Injection pump Type number : 0 460 414 127 electromagnet>Volt: 12 Customer Part-No. : Full-load del. with charge press.: Customer-specific information 1/min: 1150 Charge press. hPa: 1200 Customer : MAXION Del. quantity cm3/ 1000s.: 69.0...70.0 : GEMINI Engine Shutoff electromagnet>Volt: 12 TEST BENCH REQUIREMENTS Dispersion cm3/: 3.0 Overflow restricti: 1 463 456 344 1000s.: (4.0) Full-load del. w/out charge press.: Calibrating oil return>temp. > °C with>thermometer> : 54.00...56.00 1/min: 500 Del. quantity cm3/ > 1000s.: 50.5...51.5 Inlet press., bar : 0.30...0.40 Shutoff electromagnet>Volt: 12 Calibrating nozzle-holder : 1 688 901 116 assembly> Low-idle speed regulation Opening bar: 204.00...210.00 1/min: 350 Pressure> Speed Del. quantity cm3/ > 1000s.: 16.5...20.5 Perforated plate Shutoff diameter> mm: 0.5 electromagnet>Volt: 12 Del. quantity cm3/: 4.0 1000s.: (5.0) Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 Full-load speed regulation x Wall>thickness : 2.00 1/min: 2100 x Length> mm: 450 Speed Charge press hPa: 1200 Start of delivery Del. quantity cm3/ 1000s.: 48.0...52.0 Prestroke mm: -> > (from BDC): -Shutoff electromagnet>Volt: 12 Start of delivery block Start: Piston stroke mm: 1.54 Outlet > : A 1/min: 100 Speed Del. quantity cm3/: 61.0...111.0 Injection-pump setting values 1000s.: 61.0 mind> Test specifications in parentheses Shutoff electromagnet>Volt: 12 Timing-device travel

Inspection-pump test specifications

Speed

1/min: 1600

Test specifications	in parentheses	+	<pre>electromagnet>Volt: Overflow :</pre>	12
Timing-device chara	cteristic:	Ŧ	quantity> cm3/10s:	(96.10209.80)
1st speed 1/min:	1300	I	Delivery-quant. and	breakaway char.:
Charge press hPa:		1	bottvo. y quarror arra	or canana, ona
TD travel mm:	0.801.40	1		
> mm:	(0.501.70)	1	1nd speed 1/min:	700
electromagnet>Volt:		1	Charge-air pressure	
2nd speed 1/min:		1	point> hPa:	
	1200	1	Shutoff	
	3.103.30	1	electromagnet>Volt:	12
> mm:	(2.703.70)	1	Del. quantity cm3/:	
Shutoff	(21) 011101	1		(62.568.5)
electromagnet>Volt:	12	1	2nd speed 1/min:	
3rd speed 1/min:	1900	1	Charge press. hPa:	
Charge press hPa:		\mathbf{I}	Shutoff	1200
TD travel mm:	/ 40 5 20	Ι	electromagnet Volt:	12
> mm:	(4.305.50)	Τ	Del. quantity cm3/:	
Shutoff	(4.303.30)	T	> 1000s.:	
	12	T	3rd speed 1/min:	
electromagnet>Volt:	12	T		
Complement management	a abanastanistis.	T	Charge press. hPa: Shutoff	1200
Supply-pump pressur	e characteristic:	T		10
Ant owned Almini	(00	Ť	electromagnet>Volt:	
1st speed 1/min:		Ť	Del. quantity cm3/:	
Charge press. hPa:	1200	†		(20.032.0)
Supply-pump	7 70 / 70	†	4th speed 1/min:	
•	3.704.30	†	Charge press. hPa:	1200
Shutoff	4.0	†	Shutoff	
electromagnet>Volt:	12	*************************************	electromagnet>Volt:	12
2nd speed 1/min:		+	Del. quantity cm3/:	
Charge press. hPa:	1200	+		(45.0055.00)
Subbra-brumb		+	5th speed 1/min:	
•	6.407.00	+	Charge press. hPa:	1200
Shutoff	•-	+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	12
3rd speed 1/min:		+	Del. quantity cm3/:	70.574.5
Charge press. hPa:	1200	+		(69.575.5)
Supply-pump		†	6th speed 1/min:	
•	7.307.90	+	Charge press. hPa:	1200
Shutoff	• •	+	Shutoff	
electromagnet>Volt:		+	electromagnet>Volt:	
4th speed 1/min:		+	Del. quantity cm3/:	
• •	1200	†		(67.072.0)
Supply-pump		+	7th speed 1/min:	
	8.308.90	+	Charge press. hPa:	1200
Shutoff		+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	
		+	Del. quantity cm3/:	
Overlow quantity at	overflow valve:	+		(68.576.5)
		+	8th speed 1/min:	
1st speed 1/min:		+	Charge press. hPa:	-
Charge press. hPa:	1200	+	Shutoff	
Shutoff		+	electromagnet>Volt:	
electromagnet>Volt:		+	Del. quantity cm3/:	
	88.80133.30	+	> 1000s.:	(48.054.0)
quantity> cm3/10s:		+		
2nd speed 1/min:		+		
Charge press. hPa:	1200	+		
Shutoff		+	Electr. shutoff:	

1st speed 1/min: 350 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 350 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 16.5...20.5 1000s.: (13.5...23.5) cm3/: 4.0 Dispersion 1000s.: (5.0) 1/min: 315 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 33.0...41.0 1000s.: (30.0...44.0) > 3rd speed 1/min: 430 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 350 1st speed Shutoff electromagnet>Volt: 12 Del. quantity_cm3/: 34.00...74.00 1000s.: -1/min: 250 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 30.00...80.00 1000s.: -Shutoff electromagnet: Cut-in : 10.0 >min voltage : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 2.7...2.9 K KF mm: KOT mm: 1.3...1.6 MS1 mm: 44.0...48.0 Ya mm: 50.5...61.5 Yb Remarks:

Ya = Distance between VE flange and

speed-control lever in idle
position
Measurement point = edge of control
lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Supply-pump pressure Note inst. in remarks column 1/min: 800 Setting value bar: 6.70...7.30 Shutoff Test scheet : MWM Edition : 01.03.96 electromagnet>Volt: 12 replaces Calibrating oil : ISO-4113 Full-load del. w/out charge press.: : VE4/12F1175R533 1/min: 800 Injection pump Speed : 0 460 424 098 Del. quantity cm3/ Type number Customer Part-No. : > 1000s.: 76.8...77.8 Shutoff electromagnet>Volt: 12 Customer-specific information Dispersion cm3/: 4.0 1000s.: (4.5) Customer : MWM Engine : TD 226-B4 DI Low-idle speed regulation 1/min: 275 TEST BENCH REQUIREMENTS Speed Del. quantity cm3/ Overflow restricti: 1 463 456 344 1000s.: 7.0...13.0 Shutoff Calibrating-oil electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (5.0) return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Full-load speed regulation Inlet press., bar: 0.30...0.40 1/min: 1175 Del. quantity cm3/ Calibrating nozzle-holder 1000s.: 50.0...56.0 : 1 688 901 110 assembly> Shutoff electromagnet>Volt: 12 Opening. bar: 247.00...253.00 Pressure> Start: Perforated-plate 1/min: 100 diameter> mm: 0.5 Speed Del. quantity cm3/: 99.0...101.0 mind> 1000s.: 99.0 Test inj. tubing : 1 680 750 017 Shutoff electromagnet>Volt: 12 Outside diameter : 6.00 x Wall>thickness : 2.00 Inspection-pump test specifications Test specifications in parentheses mm: 840 x Length> Timing-device characteristic: Start of delivery Prestroke mm: -1/min: 500 (from BDC): -1st speed mm: 1.6...2.4 TD travel > mm: (1.3...2.7) Injection-pump setting values electromagnet>Volt: 12 Test specifications in parentheses 2nd speed 1/min: 900 mm: 4.7...5.5 TD travel Timing-device travel mm: (4.4...5.8)

Shutoff

3rd speed

TD travel

electromagnet>Volt: 12

1/min: 800

mm: 4.2...4.6

J22

Speed

Shutoff

1/min: 800

Setting value mm: 4.20...4.60

electromagnet>Volt: 12

> mm: (3.73.1)	† > 10008.: (70.0/6.0)
	+ 6th speed 1/min: 800
Supply-pump pressure characteristic:	+ Shutoff
	<pre>+ electromagnet>Volt: 12</pre>
1st speed 1/min: 500	Del. quantity cm3/: 76.877.8
Supply-pump	+ > 1000s.: (74.879.8)
pressure> bar: 5.46.0	7th speed 1/min: 600
Shutoff	
	+ Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
2nd speed 1/min: 800	+ Del. quantity cm3/: 72.078.0
Supply-pump	+ > 1000s.: (69.580.5)
pressure> bar: 6.77.3	+ 8th speed 1/min: 400
Shutoff	+ Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
3rd speed 1/min: 1100	Del. quantity cm3/: 69.075.0
Supply-pump	+ > 1000s.: (68.076.0)
pressure> bar: 7.68.2	7 / 10003 (00.0/0.07
	T
Shutoff	†
electromagnet>Volt: 12	† Mech. shutoff:
	+
Overlow quantity at overflow valve:	+ 1st speed 1/min: 1100
•	+ Del. quantity cm3/: 0.003.00
1st speed 1/min: 400	+ > 1000s.: (0.003.00)
Shutoff	Shutoff
electromagnet>Volt: 12	electromagnet>volt: 12
	etectionagnet/vott. 12
Overflow : 102.7142.2	T = 1
quantity> cm3/10s: (87.7157.2)	+ Electr. shutoff:
2nd speed 1/min: 1100	†
Shutoff	+ 1st speed 1/min: 275
electromagnet>Volt: 12	+ Del. quantity cm3/: 0.003.00
Overflow : 111.1166.6	+ > 1000s.; (0.003.00)
quantity> cm3/10s: (96.1181.6)	+ Shutoff
quality by billor took trotter to re-	+ electromagnet>volt: -
Delivery-quant. and breakaway char.:	1
becively quarte, and breakaway char	Tella dalayanya
	+ Idle delivery:
4 1 1 4/1 4700	1
1nd speed 1/min: 1300	+ 1st speed 1/min: 275
Shutoff	+ Shutoff
electromagnet>Volt: 12	<pre>+ electromagnet>Volt: 12</pre>
Del. quantity cm3/: 0.003.00	+ Del. quantity cm3/: 7.0013.00
> 1000s.: -	+ > 1000s.: (3.5016.50)
2nd speed 1/min: 1250	Dispersion cm3/: 3.5
Shutoff	+ > 1000s.: (6.5)
electromagnet Volt: 12	2nd speed 1/min: 350
Del. quantity cm3/: 0.015.0	+ Shutoff
> 1000s.: -	+ electromagnet>Volt: 12
3rd speed 1/min: 1200	+ Del. quantity cm3/: 0.003.00
Shutoff	+ > 1000s.: (0.003.00)
electromagnet>Volt: 12	+
Del. quantity cm3/: 15.0045.00	Automatic starting fuel delivery:
> 1000s.: -	
4th speed 1/min: 1175	1st speed 1/min: 250
Shutoff	Shutoff
electromagnet>Volt: 12	+ electromagnet>Volt: 12
Del. quantity cm3/: 50.056.0	+ Del. quantity cm3/: 60.0090.00
> 1000s.: (44.561.5)	+ > 1000s.: -
5th speed 1/min: 1100	+
Shutoff	+ 2nd speed 1/min: 150
electromagnet>Volt: 12	+ Shutoff
Del. quantity cm3/: 71.574.5	+ electromagnet>Volt: 12
to the transfer of the transf	· · · · · · · · · · · · · · · · · · ·

Del. quantity cm3/: 90.00...140.00 > 1000s.: -

4th speed 1/min: 100

Shutoff

electromagnet>Volt: 12

Del. quantity cm3/: 99.0...101.0 V > 1000s.: (92.0...108.0) V

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: 3.5...3.8 KF mm: KOT MS1 mm: D.9...1.3 SVS max. mm: 1.6 Ya mm: 41.4...45.4

Remarks:

Yb

:

mm: 40.2...45.8

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Starting delivery check V = Speed-control lever in full-load position BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test scheet : MAN
Edition : 01.03.96
replaces : 10.06.94
Calibrating oil : ISO-4113

Injection pump : VE4/12F115OR587 Type number : 0 460 424 105

Customer Part-No. :

Customer—specific information Customer : MAN

Engine : "DI" 0824 LUE 521

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 110

Opening |

Pressure> bar: 250.00...253.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 688 901 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 900 Charge press. hPa: 1000

Setting value mm: 1.80...2.20

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 900 Charge press hPa: 1000

Setting value bar: 6.70...7.30

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 800 Charge press. hPa: 1000

Del. quantity cm3/

> 1000s.: 112.5...113.5

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 > 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 450

Del. quantity cm3/

> 1000s.: 63.00...64.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 350

Del. quantity cm3/

> 1000s.: 18.00...22.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 > 1000S.: (6.5)

Full-load speed regulation

Speed 1/min: 1250 Charge press hPa: 1000

Del. quantity cm3/

> 1000s.: 67.00...73.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100 Charge press hPa: -

Del. quantity cm3/: 90.00...150.00

mind> 1000s.: 90.00

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device chara	cteristic:	+	1nd speed 1/min:	
		+	Charge-air pressure	
2nd speed 1/min:		+		400
Charge press hPa:		+	Shutoff	
TD travel mm:	2.403.20	+	electromagnet>Volt:	12
> mm:	(2.103.50)	+	Del. quantity cm3/:	
Shutoff		+		(96.0103.0)
electromagnet>Volt:	12	1	2nd speed 1/min:	
3rd speed 1/min:		1	Charge press. hPa:	
	1000	1	Shutoff	1000
	1.802.20	1	electromagnet Volt:	12
> mm:	(1.302.70)	T		
***************************************	(1.302.70)	T	Del. quantity cm3/:	
Shutoff	13	†		(0.003.00)
electromagnet>Volt:	12	†	3rd speed 1/min:	
4th speed 1/min:		+	Charge press. hPa:	1000
Charge press hPa:		+	Shutoff	
	0.801.60	+	electromagnet>Volt:	
> mm:	(0.501.90)	+	Del. quantity cm3/:	0.0015.00
Shutoff		+		(0.0015.00)
electromagnet>Volt:	12	1	4th speed 1/min:	1290
		1	Charge press. hPa:	
Supply-pump pressur	e characteristic:	1	Shutoff	1000
ouppey pump pressur	e character istre.	I	electromagnet>Volt:	12
1st speed 1/min:	450	T		
		Ť	Del. quantity cm3/:	
Charge press. hPa:	1000	+		(15.0055.00)
Supply-pump		+	5th speed 1/min:	
pressure> bar:	4.705.30	+	Charge press. hPa:	1000
Shutoff		+	Shutoff	
electromagnet>Voit:	12	+	electromagnet>Volt:	12
2nd speed 1/min:	900	+	Del. quantity cm3/:	
Charge press. hPa:		+		(61.5078.50)
Supply-pump		1	9th speed 1/min:	
pressure> bar:	6.70 7.30	1	Charge press. hPa:	
Shutoff	0.70	1	Shutoff	1000
electromagnet>Volt:	12	T	electromagnet>Volt:	12
and another 1/2:	1000	T	Polyment to an 7/2	00 00 407 00
3rd speed 1/min:		T	Del. quantity cm3/:	
Charge press. hPa:	1000	†		(96.50104.50)
Supply-pump		+	10th speed 1/min:	
	7.107.70	+	Charge press. hPa:	1000
Shutoff		+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	12
		+	Del. quantity cm3/:	102.5107.5
Overlow quantity at	overflow valve:	+		(101.0109.0)
		1	12th speed 1/min:	
1st speed 1/min:	450	1	Charge press. hPa:	
Charge press. hPa:		1	Shutoff	1000
Shutoff		1	electromagnet>Volt:	12
	12	T	Del. quantity cm3/:	
electromagnet>Volt:		T		
	41.7086.10	Ť		(100.50115.50
quantity> cm3/10s:		†	18th speed 1/min:	
2nd speed 1/min:		t	Charge press. hPa:	-
Charge press. hPa:	1000	+	Shutoff	
Shutoff		+	electromagnet>Volt:	
electromagnet>Volt:	12	+	Del. quantity cm3/:	63.0064.00
	55.60139.00	+		(60.5066.50)
quantity> cm3/10s:		+	20th speed 1/min:	
		+++++++++++++++++++++++++++++++++++++++	Charge press. hPa:	
Delivery-quant. and	breakaway char :	1	Shutoff	
DOCTION SAGRET AND	- Januaray Oliai	1	electromagnet>Volt:	12
		I	Del. quantity cm3/:	
		- T-	VELL GUGILLEY LIN-1/.	1 1 Ja J L Jan a 1 F 44 a 3 f 1

1000s.: (114.00...126.00) > Mounting and assembly dimensions: Mech. shutoff: Designation mm: 3.6...3.8 K 1st speed 1/min: 1150 KF mm: 6.2...6.6 Charge press. hPa: 1000 MS1 mm: 1.0...1.3 Del. quantity cm3/: 0.00...3.00 > 1000s.: (0.00...3.00) SVS max. mm: 3.2 mm: 41.8...44.8 Ya mm: 38.0...43.8 KSB/AFB Yh Volt: 12 valve Remarks: Electr. shutoff: : MAN - NR.7270 1st speed 1/min: 350 Ya = Distance between VE flange and Del. quantity cm3/: 0.00...3.00 speed-control lever in idle 1000s.: (0.00...3.60) position Shutoff Measurement point = edge of control Lever on drive end electromagnet>volt: -Idle delivery: Yb = Distance between VE flange and 1/min: 350 1st speed speed-control lever in rated speed Shutoff position electromagnet>Volt: 12 Measurement point = edge of control Del. quantity cm3/: 18.00...22.00 lever on distributor-head end 1000s.: (13.50...26.50) cm3/: 6.0 Dispersion 1000s.: (6.5) 2nd speed 1/min: 400 Shutoff Permissible port/port scatter with stop test, electrical = max. 5.0 electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 ccm/1000 S. 1000s.: (0.00...3.00) Permissible port/port scatter with Automatic starting fuel delivery: stop test, mechanical = max. 5.0ccm/1000 S. 1/min: 170 1st speed Shutoff Pump with slave plunger electromagnet>Volt: 12 Del. quantity cm3/: 90.00...150.00 1000s.: -1/min: 220 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 30.00...90.00 1000s.: -1/min: 100 4th speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 90.00...150.00 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0

Rated voltage

: 12.0

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : MAN Edition : 29.02.96 replaces : ISO-4113 Calibrating oil Injection pump : VE4/12F1150R609 Type number : 0 460 424 107 Customer Part-No. : Customer-specific information Customer : MAN : D 0824LUE 522 Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar: 0.30...0.40 Calibrating nozzle-holder : 1 688 901 110 assembly> Opening bar: 247.00...253.00 Pressure> Perforated-plate diameter> mm: 0.5 Test inj. tubing : 1 680 750 017 mm: 840 mm: -

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> Start of delivery Prestroke (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 950 Speed Charge press. hPa: 1000 Setting value mm: 1.7...2.1 AFB/AFB

Volt: 12 valve > Shutoff electromagnet>Volt: 12 Supply-pump pressure 1/min: 950 Speed Charge press hPa: 1000 Setting value bar: 6.90...7.50 KSB/AFB valve Volt: 12 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 900 Speed Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 96.5...97.5 KSB/AFB valve > Volt: 12 Shutoff electromagnet>Volt: 12 cm3/: 4.0Dispersion 1000s.: (4.5) Full-load del. w/out charge press.: 1/min: 500 Speed Del. quantity cm3/ > 1000s.: 65.5...66.5 11 KSB/AFB valve Volt: 12 Shutoff electromagnet>Volt: 12 Low-idle speed regulation Speed 1/min: 375 Charge press hPa: -Del. quantity cm3/ 1000s.: 16.0...20.0 > KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 6.0 1000s.: (6.5) Full-load speed regulation 1/min: 1250 Speed hPa: 1000 Charge press Del. quantity cm3/ 1000s.: 59.0...65.0 > KSB/AFB > Volt: 12 valve Shutoff electromagnet>Volt: 12

	+	Charge press. hPa:	1000
Start:	‡	Supply-pump pressure> bar:	7.78.3
Speed 1/min: 100	+	KSB/AFB	
Charge press hPa: -	†	valve > Volt:	12
Del. quantity cm3/: 90.00150.00	+	Shutoff	
mind> 1000s.: 90.00 KSB/AFB	‡	electromagnet>Volt:	12
Valve > Volt: 12 Shutoff	<u>†</u>	Overlow quantity at	overflow valve:
electromagnet>Volt: 12	I	1st speed 1/min:	500
	Ŧ	Charge press. hPa:	
Inspection-pump test specifications	+	KSB/AFB	4.6
Test specifications in parentheses	‡	<pre>valve > Volt: Shutoff</pre>	12
Timing-device characteristic:	<u>†</u>	<pre>electromagnet>Volt: Overflow :</pre>	
1st speed 1/min: 850	1	quantity> cm3/10s:	
Charge press hPa: 1000	1	2nd speed 1/min:	
TD travel mm: 0.61.4	I	Charge press. hPa:	
	T	KSB/AFB	1000
	T	valve > Volt:	12
KSB/AFB	Ť		12
valve > Volt: 12	+	Shutoff	40
electromagnet>Volt: 12	+	electromagnet>Volt:	12
2nd speed 1/min: 950	+	Overflow :	
Charge press hPa: 1000	+	quantity> cm3/10s:	(40.60154.00)
TD travel mm: 1.72.1	+		
> mm: (1.22.6)	+	Delivery-quant. and	breakaway char .:
KSB/AFB	+		
valve > Volt: 12	+		
Shutoff	+	1nd speed 1/min:	500
electromagnet>Volt: 12	1	Charge-air pressure	
3rd speed 1/min: 1050	+	point> hPa:	
Charge press hPa: 1000	1	LDA-stroke mm:	
TD travel mm: 2.303.10	1	KSB/AFB	
> mm: (2.003.40)	1	valve > Volt:	12
KSB/AFB	1	Shutoff	16
valve > Volt: 12	I	electromagnet>Volt:	12
Shutoff	Ι	Del. quantity cm3/:	
	T		(84.591.5)
electromagnet>Volt: 12	T		
O	T	2nd speed 1/min:	
Supply-pump pressure characteristic:	Ŧ	Charge press. hPa: KSB/AFB	
1st speed 1/min: 500	+	valve > Volt:	12
Charge press. hPa: 1000	+	Shutoff	
Supply-pump	+	electromagnet Volt:	12
pressure> bar: 4.95.5	+	Del. quantity cm3/:	
KSB/AFB	+	> 1000s.:	
valve > Volt: 12	1	3rd speed 1/min:	
Shutoff	1	Charge press. hPa:	
electromagnet>Volt: 12	1	KSB/AFB	
2nd speed 1/min: 950	1	valve > Volt:	12
	1	Shutoff	10
	I	electromagnet>Volt:	12
Supply-pump pressure> bar: 6.97.5	T		
	T	Del. quantity cm3/:	
(SB/AFB	T		(0.032.0)
valve > Volt: 12	+	4th speed 1/min:	
Shutoff	+	Charge press. hPa:	1000
electromagnet>Volt: 12	+	KSB/AFB	
3rd speed 1/min: 1150	+	valve > Volt:	17

Shutoff		+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>volt:	12
Del. quantity cm3/:	59.065.0	1	KSB/AFB	
> 1000s.:	(53.570.5)	1	valve > Volt:	12
5th speed 1/min:		1		,_
Charge press. hPa:		1	Electr. shutoff:	
KSB/AFB		1	Eccour Shatorr.	
valve > Volt:	12	1	1st speed 1/min:	375
Shutoff	16	1	Charge press. hPa:	
electromagnet>Volt:	12	\mathbf{I}	Del. quantity cm3/:	
Del. quantity cm3/:	90 5 O/ 5	T		(0.003.00)
	(88.096.0)	T	Shutoff	(0.005.00)
		T		_
		T	electromagnet>volt:	_
Charge press. hPa:	1000	T	KSB/AFB	42
KSB/AFB	42	Ť	valve > Volt:	12
valve > Volt:	12	Ť	Tall a dal 2	
Shutoff	40	†	Idle delivery:	
electromagnet>Volt:	12	†	4	77-
Del. quantity cm3/: 5		†	1st speed 1/min:	3/5
	(94.599.5)	†	>KSB/AFB	4.0
7th speed 1/min:		†	valve > Volt:	12
Charge press. hPa: '	7000	†	Shutoff	
KSB/AFB		+	electromagnet>Volt:	12
<pre>valve > Volt: '</pre>	12 ·	+	Del. quantity cm3/:	16.020.0
Shutoff		+		(11.524.5)
electromagnet>Volt: '		+	Dispersion cm3/:	6.0
Del. quantity cm3/: '	101.0106.0	+	> 1000s.:	(6.5)
> 1000s.:	(99.5107.5)	+	2nd speed 1/min:	500
8th speed 1/min: 5	500	+	KSB/AFB	
Charge press. hPa:	1000	ļ	<pre>valve > Volt:</pre>	12
KSB/AFB		1	Shutoff	
valve > Volt: 1	12	1	electromagnet>Volt:	12
Shutoff		1	Del. quantity cm3/:	
electromagnet>Volt: 1	12	1		(0.003.00)
Del. quantity cm3/: 9	98.0107.0	+		
> 1000s.:	(96.5108.5)	1	Automatic starting 1	fuel delivery:
9th speed 1/min: 5		1		doc doctroity.
Charge press. hPa:		1	1st speed 1/min:	170
KSB/AFB			KSB/AFB	1.0
valve > Volt: 1	12 .		valve > Volt:	12
Shutoff			Shutoff	16
electromagnet>Volt: 1	12		electromagnet>Volt:	12
Del. quantity cm3/: 6	15 5 66 5	Ι	Del. quantity cm3/:	90 nn 150 nn
	(63.069.0)	Γ	> 1000s.:	
10th speed 1/min: 9		Ι	> 10000	
		I	2nd speed 1/min:	220
Charge press. hPa: 1 KSB/AFB	1000		KSB/AFB	220
valve > Volt: 1			valve > Volt:	10
	12.		Shutoff	14
Shutoff	-			12
electromagnet>Volt: 1			electromagnet>Volt:	
Del. quantity cm3/: 9		T	Del. quantity cm3/:	
> 1000s.: ((94.599.5)	T	> 1000s.:	_
	-	T	/+h ===== 0 /==	100
as a la servicio della servicio dell	-		4th speed 1/min:	100
Mech. shutoff:	-		KSB/AFB	10
A=4 ==== 3	450	1	valve > Volt:	14
1st speed 1/min: 1			Shutoff	1 5
Charge press. hPa: 1	1000		electromagnet>Volt:	
Del. quantity cm3/: 0	J.UU3.UU -		Del. quantity cm3/:	
> 1000s • ('A AA 3 AA) -	- -	> 1000s.•	-

Shutoff electromagnet:

Cut-in

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K mm: 3.6...3.8 KF mm: 6.2...6.6 MS1 mm: 1.1...1.4 SVS max. mm: 3.8 FH mm: KSB=7.1MM mm: 42.3...44.3 Yb mm: 38.0...43.8

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Pump with slave plunger

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

electromagnet>Volt: 12 BOSCH-INJ.-PUMP TEST SPECIFICATIONS Supply-pump pressure Note inst. in remarks column Speed 1/min: 900 : MAN Test scheet Charge press hPa: 1000 Setting value bar: 6.70...7.30 Edition : 29.02.96 replaces Shutoff Calibrating oil : ISO-4113 electromagnet>Volt: 12 Full-load del. with charge press.: Injection pump : VE4/12F1150R625 Type number : 0 460 424 112 Customer Part-No. : 1/min: 900 Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 84.5...85.5 Customer-specific information Shutoff Customer : MAN electromagnet>Volt: 12 : D 0824LUE 523 cm3/: 4.0 Engine Dispersion 1000s.: (4.5) TEST BENCH REQUIREMENTS Full-load del. w/out charge press.: Overflow restricti: 1 463 456 303 1/min: 450 Calibrating-oil Del. quantity cm3/ return>temp. > °C 1000s.: 73.5...74.5 with>thermometer> : 40.00...48.00 Shutoff Electronically> : 42.00...50.00 electromagnet>Voit: 12 Inlet press., bar: 0.30...0.40 Low-idle speed regulation 1/min: 350 Calibrating nozzle-holder Speed : 1 688 901 110 assembly> Charge press hPa: -Del. quantity cm3/ 1000s.: 13.0...17.0 Opening bar: 247.00...253.00 Shutoff Pressure> electromagnet>Volt: 12 Del. quantity cm3/: 6.0 Perforated-plate 1000s.: (6.5) diameter> mm: 0.5 Full-load speed regulation Test inj. tubing : 1 680 750 017 1/min: 1250 Speed hPa: 1000 Outside diameter : 6.00 Charge press Del. quantity cm3/ x Wall>thickness : 2.00 1000s.: 53.0...59.0 x Length> mm: 840 Shutoff Start of delivery electromagnet>Volt: 12 Prestroke mm: -(from BDC): -Start: 1/min: 100 Speed Injection-pump setting values Charge press hPa: -Test specifications in parentheses Del. quantity cm3/: 90.00...150.00 1000s.: 90.00 mind> Timing-device travel Shutoff 1/min: 900 electromagnet>Volt: 12 Speed

> Inspection—pump test specifications Test specifications in parentheses

Shutoff

Charge press. hPa: 1000 Setting value mm: 2.0...2.4

		+	1nd speed 1/min:	
Timing-device chara	cteristic:	+	Charge-air pressure	-setting
_		+		300
1st speed 1/min:	800	1	LDA-stroke mm:	
Charge press hPa:		1	Shutoff	
TD travel mm:	1.0 . 1.8	1	electromagnet>Volt:	12
TD travel mm:	(0.72.1)	1	Del. quantity cm3/:	73 5 74 5
electromagnet>Volt:		T		(70.577.5)
2nd speed 1/min:		T	2nd speed 1/min:	
		Ť		
	1000	Ť	Charge press. hPa:	1000
TD travel mm:	2.02.4	+	Shutoff	40
	(1.52.9)	†	electromagnet Volt:	72
Shutoff	•	+	Del. quantity cm3/:	0.003.00
electromagnet>Volt:	12	┤╸┤╸┤╸┥╸┥╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸┩╸	> 1000s.:	
3rd speed 1/min:		+	3rd speed 1/min:	
Charge press hPa:	1000	+	Charge press. hPa:	1000
TD travel mm:	2.603.40	+	Shutoff	
> mm:	(2.303.70)	+	electromagnet>Volt:	12
Shutoff		1	Del. quantity cm3/:	0.015.0
electromagnet>Volt:	12	1	> 1000s.:	
e coot, anagries, vocat	, 2	1	4th speed 1/min:	
Supply-pump pressure	characteristic:	1	Charge press. hPa:	
subhry build by essure	e character istre.	Ι	Shutoff	1000
1st speed 1/min:	450	T		12
		T	electromagnet>Volt:	
Charge press. hPa:	7000	†	Del. quantity cm3/:	
Supply-pump		†		(47.564.5)
•	4.75.3	+	5th speed 1/min:	
Shutoff		+	Charge press. hPa:	1000
electromagnet>Volt:	12	+	Shutoff	
2nd speed 1/min:		+	electromagnet>Volt:	12
Charge press. hPa:		+	Del. quantity cm3/:	65.085.0
Supply-pump		1	> 1000s.:	
pressure> bar:	6.77.3	1	6th speed 1/min:	
Shutoff		1	Charge press. hPa:	
electromagnet>Volt:	12	1	Shutoff	.000
3rd speed 1/min:	1150	1	electromagnet>Volt:	12
Charge press. hPa:		I	Del. quantity cm3/:	
•	1000	T		(78.586.5)
Supply-pump	77 07	T		
	7.78.3	†	7th speed 1/min:	
Shutoff	4.0	+	Charge press. hPa:	1000
electromagnet>Volt:	12	†	Shutoff	
		+	electromagnet>Volt:	12
Overlow quantity at	overflow valve:	+	Del. quantity cm3/:	82.087.0
		+	> 1000s.:	(80.588.5)
1st speed 1/min:	500	+	8th speed 1/min:	450
Charge press. hPa:		+	Charge press. hPa:	1000
Shutoff		+	Shutoff	
electromagnet>Volt:	12	1	electromagnet>Volt:	12
	41.7086.10	1	Del. quantity cm3/:	
quantity> cm3/10s:		1		(76.588.5)
		Ţ	9th speed 1/min:	
2nd speed 1/min:		T		
Charge press. hPa:	TOUL	Ť	Charge press. hPa:	
Shutoff	4.0	†	Shutoff	40
electromagnet>Volt:	12	+	electromagnet>Volt:	
	55.60139.00	+	Del. quantity cm3/:	
quantity> cm3/10s:	(40.60154.00)	+		(57.563.5)
•		+	10th speed 1/min:	900
Delivery-quant. and	breakaway char.:	+	Charge press. hPa:	
and the second of the second o	· · · · · · · · · · · · · · · · · · ·	+	Shutoff	
		1	electromagnet>Volt:	12

Del. quantity cm3/: 84.5...85.5 >min voltage : 10.0 1000s.: (82.5...87.5) Rated voltage : 12.0 Mounting and assembly dimensions: Mech. shutoff: Designation 1st speed 1/min: 1150 K mm: 3.6...3.8 Charge press. hPa: 1000 Del. quantity cm3/: 0.00...3.00 KF mm: 6.2...6.6 MS1 mm: 1.1...1.4 1000s.: (0.00...3.00) SVS max. mm: 2.7 FH mm: KSB=7.1MM mm: 41.8...44.8 electromagnet>volt: 12 Ya mm: 38.1...43.9 Yb Electr. shutoff: Remarks: 1/min: 350 1st speed Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 Ya = Distance between VE flange and 1000s.: (0.00...3.00) speed-control lever in idle Shutoff position Measurement point = edge of control electromagnet>volt: -Lever on drive end Idle delivery: 1st speed 1/min: 350 Yb = Distance between VE flange and speed-control lever in rated speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 13.0...17.0 Measurement point = edge of control 1000s.: (8.5...21.5) cm3/: 6.0 lever on distributor-head end Dispersion 1000s.: (6.5) > 1/min: 420 2nd speed Shutoff electromagnet>Volt: 12 Pump with slave plunger Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Permissible port/port scatter with Automatic starting fuel delivery: stop test, electrical = max. 5.0 ccm/1000 S. 1/min: 150 1st speed Shutoff Permissible port/port scatter with stop test, electrical = max. 5.0 electromagnet>Volt: 12 Del. quantity cm3/: 95.00...155.00 ccm/1000 S. 1000s.: -2nd speed 1/min: 220 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 30.00...90.00 1000s.: -4th speed 1/min: 100 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 90.00...150.00 1000s.: -Shutoff electromagnet: Cut-in

K06

Note inst. in remarks column

Test scheet : CASE Edition : 25.03.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/12F12OOR645 Type number : 0 460 424 120 Customer Part-No. : 191 963 A1

Customer-specific information

Customer : CASE

Engine : DT 268/4240

Power KW: 74

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 020

Opening |

Pressure> bar: 169.00...175.00

Perforated-plate

diameter> mm: 0.6

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 800 Setting value mm: 2.2...2.6 Supply-pump pressure

Speed 1/min: 800

Setting value bar: 5.80...6.40

Full-load del. w/out charge press.:

Speed 1/min: 800

Del. quantity cm3/

> 1000s.: 103.5...104.5

Dispersion cm3/: 3.5 > 1000s.: (4.0)

Low-idle speed regulation

Speed 1/min: 375 Del. quantity cm3/

> 1000s.: 18.0...22.0

Del. quantity cm3/: 3.0 > 1000s.: (3.5)

Full-load speed regulation

Speed 1/min: 1265

Del. quantity cm3/

> 1000s.: 73.0...77.0

Start:

Speed 1/min: 100

Del. quantity cm3/: 110.0...160.0

mind> 1000s.: 110.0

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 600

TD travel mm: 0.7...1.5 mm: (0.4...1.8)

2nd speed 1/min: 800

TD travel mm: 2.2...2.6 mm: (1.7...3.1)

3rd speed 1/min: 1050

TD travel mm: 4.10...4.90

> mm: (3.80...5.20)

Supply-pump pressure characteristic:

1st speed 1/min: 500

Supply-pump

pressure> bar: 4.4...5.0

2nd speed 1/min: 800

Supply-pump

pressure> bar: 5.8...6.4

3rd speed 1/min: 1050

Supply-pump

pressure> bar: 6.8...7.4

Overlow quantity at overflow valve:	+
1st speed 1/min: 500 Overflow : 40.281.4 quantity> cm3/10s: (25.296.4)	Cut-in >min voltage : 10.0 Rated voltage : 12.0
2nd speed	+ Mounting and assembly dimensions: + Designation + K mm: 3.63.8
Delivery-quant. and breakaway char.:	+ K mm: 3.63.8 + KF mm: - + MS1 mm: 1.31.6 + SVS max. mm: 2.4
1nd speed 1/min: 1375 Del. quantity cm3/: 0.003.00 > 10008.: -	Ya mm: 36.240.2 + Yb mm: 53.261.2
2nd speed	Remarks:
<pre>3rd speed 1/min: 1265 Del. quantity cm3/: 73.077.0 > 1000s.: (67.083.0) 4th speed 1/min: 1150 Del. quantity cm3/: 105.0108.5 > 1000s.: (100.0110.0)</pre>	Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end
5th speed 1/min: 800 Del. quantity cm3/: 103.5104.5 > 1000s.: (101.5106.5) 6th speed 1/min: 500 Del. quantity cm3/: 84.091.0 > 1000s.: (82.592.5)	Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end
	+
Mech. shutoff:	+
Mech. shutoff: 1st speed 1/min: 1200 Del. quantity cm3/: 0.03.0 >	† † † †
1st speed 1/min: 1200 Del. quantity cm3/: 0.03.0	† † † † †
1st speed	
1st speed 1/min: 1200 Del. quantity cm3/: 0.03.0 > 1000s.: - Idle delivery: 1st speed 1/min: 375 Del. quantity cm3/: 18.022.0 > 1000s.: (15.524.5) Dispersion cm3/: 3.0 > 1000s.: (3.5) 2nd speed 1/min: 450 Del. quantity cm3/: 0.003.00	+ + <t< td=""></t<>
1st speed 1/min: 1200 Del. quantity cm3/: 0.03.0 > 1000s.: - Idle delivery: 1st speed 1/min: 375 Del. quantity cm3/: 18.022.0 > 1000s.: (15.524.5) Dispersion cm3/: 3.0 > 1000s.: (3.5) 2nd speed 1/min: 450 Del. quantity cm3/: 0.003.00 > 1000s.: -	
1st speed 1/min: 1200 Del. quantity cm3/: 0.03.0 > 1000S.: - Idle delivery: 1st speed 1/min: 375 Del. quantity cm3/: 18.022.0 > 1000S.: (15.524.5) Dispersion cm3/: 3.0 > 1000S.: (3.5) 2nd speed 1/min: 450 Del. quantity cm3/: 0.003.00 > 1000S.: - Automatic starting fuel delivery: 1st speed 1/min: 220 Del. quantity cm3/: 67.087.0	+ + <td< td=""></td<>

Note inst. in remarks column

Test scheet : CDC : 25.03.96 Edition

replaces

Calibrating oil : ISO-4113

: VE4/12F1400R646 Injection pump Type number : 0 460 424 121 Customer Part-No. : 3 282 812

Customer-specific information

Customer : CDC

: 4 BTAA 3.9 Engine

KW: 97 Power Speed 1/min: 2800

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Opening

bar: 247.00...253.00 Pressure>

Perforated-plate

mm: 0.5 diameter>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery

Prestroke mm: 0.3

> (from BDC): +-0.02(0.04)

Start of delivery block Piston stroke mm: 1.95 : A Outlet >

Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 950 Speed Charge press. hPa: 1000

Setting value mm: 1.5...1.9

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

1/min: 950 Speed Charge press hPa: 1000

Setting value bar: 5.90...6.50

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

1/min: 750 Speed Charge press. hPa: 1000

Del. quantity cm3/

1000s.: 76.5...77.5

Shutoff

electromagnet>Volt: 24 Dispersion cm3/: 4.0 1000s.: (4.5)

Full-load del. w/out charge press.:

1/min: 550 Speed

Del. quantity cm3/

1000s.: 44.5...45.5 >

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

1/min: 400 Speed

Del. quantity cm3/

1000s.: 7.5...9.5

Shutoff

electromagnet>Volt: 24 Del. quantity cm3/: 5.5 1000s.: (7.0)

Full-load speed regulation

Speed 1/min: 1500 Charge press hPa: 1000

Del. quantity cm3/

1000s.: 42.0...48.0

Shutoff

electromagnet>Volt: 24

Start:

Speed 1/min: 100 Del. quantity cm3/: 75.0...145.0

mind> 1000s.: 75.0

Shutoff

electromagnet>Volt:	24	‡	point> Shutoff	hPa:	500
Inspection-pump tes	t specifications	1	electromagnet	>Vol+•	24
Test specifications		1	Del. quantity		
rest specifications	in parentieses	T	> 444111115	00000	(58.067.0)
		T			
Timing-device chara	cteristic:	†		1/min:	
		+	Charge press.	hPa:	1000
1st speed 1/min:		+	Shutoff		
	1000	+	electromagnet	Volt:	24
TD travel mm:	1.51.9	+	Del. quantity	cm3/:	0.003.00
> mm:	(1.02.4)	+		000s.:	
electromagnet>Volt:		+	3rd speed	1/min:	1550
2nd speed 1/min:	1100	+	Charge press.		
	1000	1	Shutoff	****	
		1	electromagnet	Wolt.	24
TD travel mm:	(1.93.3)	T			
	(1.73.3)	T	Del. quantity		
Shutoff	04	Ť		000s.:	
electromagnet>Volt:	24	†		1/min:	
		+	Charge press.	hPa:	1000
Supply-pump pressur	e characteristic:	+	Shutoff		
		+	electromagnet:	>Volt:	24
1st speed 1/min:	550	+	Del. quantity	cm3/:	42.048.0
Charge press. hPa:	1000	+	> 1	000s.:	(39.051.0)
Supply-pump		+	5th speed	1/min:	1400
pressure> bar:	4.04.6	1	Charge press.		
Shutoff	71.011.110	1	Shutoff	111 011	1000
electromagnet>Volt:	2/.	1	electromagnet:	Mal+•	2/.
2nd aread 1/min	050	T	Dol gunntity	07/	40 E 71 E
2nd speed 1/min:	400b	T	Del. quantity	1/Cm3	00.3(1.3
Charge press. hPa:	1000	†			(66.573.5)
Supply-pump		+		1/min:	
• • • • • • • • • • • • • • • • • • • •	5.96.5	+	Charge press.	hPa:	1000
Shutoff		+	Shutoff		
electromagnet>Volt:	24	+	electromagnet:	>Volt:	24
3rd speed 1/min:	1400	+	Del. quantity	cm3/:	76.577.5
Charge press. hPa:	1000	+	> 10	000s.:	(73.580.5)
Supply-pump		+	7th speed		
pressure> bar:	7.88.4	1	Charge press.		
Shutoff	, , , , , , , , , , , , , , , , , , , ,	1	Shutoff		
electromagnet>Volt:	24	1	electromagnet	>Val+•	24
etectionagnet/vott.	24	I	Del. quantity	cm3/-	11.5 155
	avantias valuas	T	> quantity	7000	(41.049.0)
Overlow quantity at	overflow valve:	Ť	/	1002.:	(41.049.0)
	500	Ť			
1st speed 1/min:		+			
Charge press. hPa:	ole .	t	Mech. shutoff:	•	
Shutoff		+			
electromagnet>Volt:	24	+	1st speed 1		
Overflow :	33.377.7	+	Charge press.	hPa:	1000
quantity> cm3/10s:	(18.392.7)	+	Del. quantity	cm3/:	0.03.0
2nd speed 1/min:	1400	+	> 10	000s.:	-
Charge press. hPa:	1000	+	Shutoff		
Shutoff		1	electromagnet>	etlove:	24
electromagnet>Volt:	24	1	- 1000, 0000000000		
	50.0105.5	1	Electr. shuto	f f •	
quantity> cm3/10s:		1	CLOULT SHULD!	1 1 1	
quarterty/ cm5/108:	(33.0120.3)	T	1st speed 4	l/m²~·	400
Saldram	handler of the c	T	1st speed 1		
Delivery-quant. and	preakaway char.:	†	Charge press.		
		†	Del. quantity		
		†		000s.:	-
1nd speed 1/min:		+	Shutoff		
Charge-air pressure-	setting	+	electromagnet>	volt:	***

Idle delivery: 1/min: 400 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 7.5...9.5 1000s.: (3.0...14.0) cm3/: 5.5 Dispersion 1000s.: (7.0) > 1/min: 450 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...4.00 1000s.: -Automatic starting fuel delivery: 1/min: 400 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 40.0...90.0 1000s.: -1/min: 230 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 75.00...125.0 1000s.: -Shutoff electromagnet: Cut-in : 10.0 >min voltage Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: -KF mm: -MS1 mm: 1.3...1.6 Ya mm: 34.8...38.8 Yb mm: 41.8...47.2 Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed

Measurement point = edge of control

Lever on distributor-head end

Note inst. in remarks column

Test scheet : MAN Edition : 25.03.96

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/12F1200R636-1 Type number : 0 460 424 123

Customer Part-No. :

Customer-specific information

: MAN Customer

: D 0824 LFL 05 Engine

Power KW: 114

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 110 assembly>

Opening

bar: 247.00...253.00 Pressure>

Perforated-plate

mm: 0.5 diameter>

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery Prestroke mm: -

(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 900 Speed Charge press. hPa: 1500 Setting value mm: 1.9...2.3

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

1/min: 900 Speed hPa: 1500 Charge press

Setting value bar: 7.00...7.60

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

1/min: 1000 Speed Charge press. hPa: 1500

Del. quantity cm3/

1000s.: 109.5...110.5

Shutoff

electromagnet>Volt: 24 Dispersion cm3/: 4.0 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 550

Del. quantity cm3/

1000s.: 62.0...63.0

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

1/min: 400 Speed Del. quantity cm3/

>

1000s.: 12.5...16.5

Shutoff

electromagnet>Volt: 24 Del. quantity cm3/: 6.0 1000s.: (6.5)

Full-load speed regulation

1/min: 1340 Speed Charge press hPa: 1500

Del. quantity cm3/

1000s.: 73.0...77.0

Shutoff

electromagnet>Volt: 24

Start:

1/min: 100 Speed

Del. quantity cm3/: 90.0...130.0

mind> 1000s.: 90.0

Shutoff

electromagnet>Volt: 24

Inspection-pump test specifications Test specifications in parentheses

7353 day.3 aba		†		55.5758.8
Timing-device chara	cteristic:	İ	quantity> cm3/10s:	(40.5155.8)
1st speed 1/min:	800	I	Delivery-quant. and	hreakaway char
Charge press hPa:		1	bottony quantition and	or calculary offar i
TD travel mm:		1		
	(0.31.7)	+	1nd speed 1/min:	550
electromagnet>Volt:	24	+	Charge-air pressure	-setting
2nd speed 1/min:		+	point> hPa:	500
Charge press hPa:	1500	+		7.8
TD travel mm:	1.92.3	+	Shutoff	
> na:	(1.42.8)	+	electromagnet>Volt:	
Shutoff	3/	†	Del. quantity cm3/:	
electromagnet>Volt:		†		(96.0102.0)
3rd speed 1/min:	1500	†	2nd speed 1/min: Charge press. hPa:	
Charge press hPa: TD travel mm:		I	Shutoff	1500
> mm:	(3.24.6)	Ι	electromagnet Volt:	24
Shutoff	(3,6,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	Del. quantity cm3/:	0.003.00
electromagnet>Volt:	24	1	> 1000s.:	-
4th speed 1/min:	1200	+	3rd speed 1/min:	
	1500	+	Charge press. hPa:	
TD travel mm:	4.55.3	+	Shutoff	
> mn:		+	electromagnet>Volt:	
Shutoff		+	Del. quantity cm3/:	0.015.0
electromagnet>Volt:	24	+	> 1000s.:	
		†	4th speed 1/min:	
Supply-pump pressur	e characteristic:	†	Charge press. hPa:	1500
1-t 1/-i	EEO	†	Shutoff	2/.
1st speed 1/min: Charge press. hPa:		Ī	electromagnet>Volt: Del. quantity cm3/:	
Supply-pump	1300	Ι	> 1000s.:	
pressure> bar:	5.25.8	I	5th speed 1/min:	
Shutoff	3.23.0	1	Charge press. hPa:	
electromagnet>Volt:	24	1	Shutoff	
2nd speed 1/min:		+	electromagnet>Volt:	24
Charge press. hPa:		+	Del. quantity cm3/:	73.077.0
Supply-pump		+	> 1000s.:	(67.083.0)
pressure> bar:	7.07.6	+	6th speed 1/min:	
Shutoff		†	Charge press. hPa:	1500
electromagnet>Volt:	24	+	Shutoff	0.4
3rd speed 1/min:		†	electromagnet>Volt:	24
Charge press. hPa:	1500	†	Del. quantity cm3/:	(102.5107.5
Supply-pump	8.69.2	Ī		(101.0109.0)
pressure> bar: Shutoff	0.07.2	I	7th speed 1/min: Charge press. hPa:	
electromagnet>Volt:	24	I	Shutoff	1500
etetti ollagi letz vott.	<u>-</u>	1	electromagnet>Volt:	24
Overlow quantity at	overflow valve:	1	Del. quantity cm3/:	
		+		(107.5112.5)
1st speed 1/min:	500	+	8th speed 1/min:	
Charge press. hPa:		+	Charge press. hPa:	1500
Shutoff		+	Shutoff	
electromagnet>Volt:	24	+	electromagnet>Volt:	24
Overflow :		†	Del. quantity cm3/:	774.5119.5
quantity> cm3/10s:	(26.7701.1)	†		(113.0121.0)
2nd speed 1/min:		†	9th speed 1/min:	
Charge press. hPa:	1200	T	Charge press. hPa:	1000
Shutoff	2/.	I	Shutoff electromagnet>Volt:	24
electromagnet>Volt:	LT	Т	e tech omagnet/volt:	<u>_</u>

Del. quantity cm3/: 117.0...126.0 > 1000s.: (115.5...127.5) 1/min: 550 10th speed Charge press. hPa: -Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 62.0...63.0 1000s.: (59.5...65.5) Electr. shutoff: 1/min: 400 1st speed Charge press. hPa: -Del. quantity cm3/: 0.0...3.0 1000s.: -Shutoff electromagnet>volt: -Idle delivery: 1/min: 400 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 12.5...16.5 1000s.: (9.5...19.5) Dispersion cm3/: 6.0 1000s.: (6.5) 1/min: 500 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 1000s.: -Automatic starting fuel delivery: 1/min: 250 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 10.0...50.0 1000s.: -1/min: 150 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 80.00...140.0 1000s .: -Shutoff electromagnet: Cut-in >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.6...3.8

mm: -

MS mm: 1.1...1.4 LDA stroke mm: 7.8 Ya mm: 37.4...40.4 Yb mm: 41.9...47.1

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

KF

Note inst. in remarks column

Test scheet : SOFTM Edition : 25.03.96

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/12F1800R657 Type number : 0 460 424 124

Customer Part-No. :

Customer-specific information : IVECO SOFIM Customer

Engine : 8140.23,3700

KW: 77 Power

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 54.00...56.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Opening |

bar: 247.00...253.00 Pressure>

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -> (from BDC): -

Injection pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1100 Speed Charge press. hPa: 1200 Setting value mm: 0.7...0.9 Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1100 Charge press hPa: 1200

Setting value bar: 6.50...7.10

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1100 Speed Charge press. hPa: 1200

Del. quantity cm3/

1000s.: 57.0...58.0

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.01000s.: (4.5)

Full-load del. w/out charge press.:

1/min: 550 Speed

Del. quantity cm3/

1000s.: 28.0...29.0

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 350

Del. quantity cm3/

1000s.: 6.00...10.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 1000s.: (6.5)

Full-load speed regulation

Speed 1/min: 2000 hPa: 1200 Charge press

Del. quantity cm3/

1000s.: 40.0...46.0

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100 Del. quantity cm3/: 55.0...100.0

1000s.: 55.0 mind>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:	+	Charge-air pressure	
	+	point> hPa:	500
1st speed 1/min: 1100	+	LDA-stroke mm:	6.7
Charge press hPa: 1200	+	Shutoff	
TD travel mm: 0.70.9	1	electromagnet>Volt:	12
> mm: (0.11.5)	1	Del. quantity cm3/:	45.546.5
electromagnet>Volt: 12	1		(42.549.5)
2nd speed 1/min: 1400		2nd speed 1/min:	
	T	Change proces house	4200
Charge press hPa: 1200	†	Charge press. hPa:	1200
TD travel mm: 2.53.3	+	Shutoff	40
> mm: (2.23.6)	+	electromagnet Volt:	
Shutoff	+	Del. quantity cm3/:	0.004.00
electromagnet>Volt: 12	+	> 1000s.:	
3rd speed 1/min: 1800	+	3rd speed 1/min:	2100
Charge press hPa: 1200	+	Charge press. hPa:	1200
TD travel mm: 4.605.20	+	Shutoff	
> mm: (4.205.60)	1	electromagnet>Volt:	12
Shutoff	1	Del. quantity cm3/:	
electromagnet>Volt: 12	T		(14.028.0)
etectromagnet/vott: 12	T		
	Ť	4th speed 1/min:	
Supply-pump pressure characteristic:	+	Charge press. hPa:	1200
	+	Shutoff	
1st speed 1/min: 500	+	electromagnet>Volt:	
Charge press. hPa: 1200	+	Del. quantity cm3/:	40.046.0
Supply-pump	+	> 1000s.:	(38.547.5)
pressure> bar: 4.04.6	1	5th speed 1/min:	
Shutoff	1	Charge press. hPa:	
electromagnet>Volt: 12	1	Shutoff	1200
2nd speed 1/min: 1100	\mathbf{I}	electromagnet>Volt:	12
	T	etectromagnet/vott:	16 U (3 U
Charge press. hPa: 1200	†	Del. quantity cm3/:	
Supply-pump	+		(56.563.5)
pressure> bar: 6.57.1	+	6th speed 1/min:	
Shutoff	+	Charge press. hPa:	1200
electromagnet>Volt: 12	+	Shutoff	
3rd speed 1/min: 1800	+	electromagnet>Volt:	12
Charge press. hPa: 1200	+	Del. quantity cm3/:	56.563.5
Supply-pump	1	> 1000s.:	-
pressure> bar: 9.09.6	1	7th speed 1/min:	
Shutoff	1	Charge press. hPa:	
electromagnet>Volt: 12	I	Shutoff	
esectionagnet/vott. 12	T		12
A	T	electromagnet>Volt:	
Overlow quantity at overflow valve:	†	Del. quantity cm3/:	
	+	> 1000s.:	
1st speed 1/min: 700	†	8th speed 1/min:	
Charge press. hPa: 1200	+	Charge press. hPa:	1200
Shutoff	+	Shutoff	
electromagnet>Volt: 12	+	electromagnet>Volt:	12
Overflow : 75.0119.4	+	Del. quantity cm3/:	
quantity> cm3/10s: (60.0134.4)	1		(54.061.0)
2nd speed 1/min: 1800	1	9th speed 1/min:	
Charge press. hPa: 1200	1	Charge press. hPa:	
	T	Shutoff	
Shutoff	T		10
electromagnet>Volt: 12	T	electromagnet>Volt:	
Overflow : 97.2180.5	†	Del. quantity cm3/:	
quantity> cm3/10s: (82.2195.5)	+	> 1000s.:	(25.032.0)
	+		
Delivery-quant. and breakaway char.:	+		
	+		
	+	Electr. shutoff:	
1nd speed 1/min: 750	+		
•	*		

1st speed 1/min: 350 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 350 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 6.0...10.0 1000s.: (4.0...12.0) cm3/: 6.0Dispersion > 1000s.: (6.5) 1/min: 425 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.0...3.0 1000s.: -1/min: 320 3rd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.00...18.0 1000s.: (7.00...19.0) Automatic starting fuel delivery: 1st speed 1/min: 510 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 22.0...32.0 1000s.: -1/min: 200 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 75.0...105 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.5...3.7 K KF mm: -MS1 mm: 1.3...1.6 mm: 6.7 LDA stroke mm: 33.0...35.0 Ya mm: 44.0...50.0 Yb Remarks: :

Ya = Distance between VE flange and

speed-control lever in idle
position
Measurement point = edge of control
lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : SOFIM : 25.03.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/12F1800R660 Type number : 0 460 424 125

Customer Part-No. :

Customer-specific information Customer : IVECO SOFIM

Engine : 8140.43.3700

Power KW: 86

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 344

Calibrating-oil return>temp. > °C

with>thermometer> : 54.00...56.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 027

Opening |

Pressure> bar: 247.00...253.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery
Prestroke mm: > (from BDC): -

Injection—pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1100 Charge press. hPa: 1200 Setting value mm: 1.5...1.7 Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1100 Charge press hPa: 1200

Setting value bar: 6.70...7.30

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1750 Charge press. hPa: 1200 Del. quantity cm3/

> 1000s.: 62.5...63.5

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 > 1000S.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 550

Del. quantity cm3/

> 1000s.: 33.5...34.5

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 375

Del. quantity cm3/

> 1000s.: 5.00...9.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 6.0 > 1000S.: (6.5)

Full-load speed regulation

Speed 1/min: 2000 Charge press hPa: 1200

Del. quantity cm3/

> 1000s.: 40.0...46.0

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 60.0...90.0

mind> 1000s.: 60.0

Shutoff

electromagnet>Volt: 12

Inspection—pump test specifications Test specifications in parentheses

	Timing-device chara	cteristic:	+	Charge-air pressure	
			+	point> hPa:	
	1st speed 1/min:		+		7.0
	Charge press hPa:		+	Shutoff	
		1.51.7	+	electromagnet>Volt:	12
	> mm:	(0.92.3)	+	Del. quantity cm3/:	53.554.5
	electromagnet>Volt:	12	1	> 1000s.:	(50.557.5)
	2nd speed 1/min:		+	2nd speed 1/min:	
	Charge press hPa:		1	Charge press. hPa:	
	Th travel mm.	2.53.3	1	Shutoff	, 200
		(2.13.5)	1	electromagnet Volt:	12
	Shutoff	(2.11.13.3)	I	Del. quantity cm3/:	
	electromagnet>Volt:	13	T	> 1000s.:	
			T		
	3rd speed 1/min:		T	3rd speed 1/min:	
	<u> </u>	1200	†	Charge press. hPa:	1200
		3.504.10	+	Shutoff	4.0
		(3.104.50)	†	electromagnet>Volt:	
	Shutoff		+	Del. quantity cm3/:	
	electromagnet>Volt:	12	+		(14.028.0)
			+	4th speed 1/min:	2000
	Supply-pump pressure	e characteristic:	+	Charge press. hPa:	1200
			+	Shutoff	
	1st speed 1/min:	600	1	electromagnet>Volt:	12
	Charge press. hPa:		1	Del. quantity cm3/:	
	Supply-pump		1		(38.547.5)
		5.15.7	1	5th speed 1/min:	
	Shutoff	3.11.1.3.1	1	Charge press. hPa:	
	electromagnet>Volt:	12	T	Shutoff	1200
		1400	T		12
			T	electromagnet>Volt:	14 0 45 0
	Charge press. hPa:	1200	Ť	Del. quantity cm3/:	01.005.0
	Supply-pump		†		(59.566.5)
	•	6.77.3	+	6th speed 1/min:	
	Shutoff		+	Charge press. hPa:	1200
	electromagnet>Volt:		+	Shutoff	
	3rd speed 1/min:		+	electromagnet>Volt:	
	Charge press. hPa:	1200	+	Del. quantity cm3/:	
	Supply-pump		+	> 1000s.:	
	pressure> bar:	8.59.1	+	7th speed 1/min:	
	Shutoff		+	Charge press. hPa:	1200
	electromagnet>Volt:	12	+	Shutoff	
			+	electromagnet>Volt:	12
	Overlow quantity at	overflow valve:	+	Del. quantity cm3/:	62.563.5
	and the same of th		+	> 1000s.:	(59.566.5)
	1st speed 1/min:	600	1	8th speed 1/min:	
	Charge press. hPa:		1	Charge press. hPa:	
	Shutoff	1,200	1	Shutoff	1200
	electromagnet>Volt:	12	1	electromagnet>Volt:	12
		75.0119.4	I	Del. quantity cm3/:	
			T	> 1000s.:	
	quantity> cm3/10s:		T		
	2nd speed 1/min:		T		
	Charge press. hPa:	1200	†	Charge press. hPa:	1200
	Shutoff	12	†	Shutoff	40
	electromagnet>Volt:		†	electromagnet>Volt:	
		97.2180.5	+	Del. quantity cm3/:	
Í	quantity> cm3/10s:	(82.2195.5)	+		(61.572.5)
			+	10th speed 1/min:	
į	Delivery-quant. and	breakaway char.:	+	Charge press. hPa:	-
			+	Shutoff	
				electromagnet>Volt:	
•	1nd speed 1/min:	800	+	Del. quantity cm3/:	33.534.5

1000s.: (30.5...37.5) > Electr. shutoff: 1/min: 325 1st speed Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 375 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 5.0...9.0 > 1000s.: (3.0...11.0) cm3/: 6.0 Dispersion 1000s.: (6.5) 1/min: 425 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.0...3.0 1000s.: -1/min: 275 3rd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 34.0...50.0 1000s.: -Automatic starting fuel delivery: 1st speed 1/min: 500 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 29.0...35.0 1000s.: -1/min: 200 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 75.0...105.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.5...3.7 K KF mm: mm: 1.4...1.7 MS1 mm: 7.0 LDA stroke mm: KSB 5.7MM FH

Ya mm: 33.0...35.0 Yb mm: 44.0...50.0

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : CDC Edition : 14.03.96 replaces : ISO-4113 Calibrating oil Injection pump : VE4/12F1300R661 Type number : 0 460 424 126 Customer Part-No. : Customer-specific information Customer : CUMMINS Engine : 4 BT F4000-EUR01 TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 109 assembly> Openina | bar: 204.00...210.00 Pressure> Perforated-plate diameter> mm: 0.5 Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length> Start of delivery Prestroke mm: -(from BDC): -

mm: 2.5...2.7 Setting value Shutoff electromagnet>Volt: 12 Supply-pump pressure 1/min: 1250 Speed Charge press hPa: 1200 Setting value bar: 7.20...7.80 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 800 Charge press. hPa: 1200 Del. quantity cm3/ 1000s.: 96.0...97.0 Shutoff electromagnet>Volt: 12 cm3/: 5.0Dispersion 1000s.: (5.0) Full-load del. w/out charge press.: 1/min: 500 Speed Del. quantity cm3/ 1000s.: 55.5...57.5 > Shutoff electromagnet>Volt: 12 cm3/: 5.0 Dispersion 1000s.: (6.0) Low-idle speed regulation 1/min: 380 Speed Del. quantity cm3/ 1000s.: 13.0...17.0 > Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 5.5 1000s.: (7.0) Full-load speed regulation 1/min: 1500 Speed Charge press hPa: 1200 Del. quantity cm3/ 1000s.: 61.0...67.0 Shutoff electromagnet>Volt: 12 Start: 1/min: 100 Del. quantity cm3/: 125.0...175.0 1000s.: 125.0 mind>

1/min: 1250

Charge press. hPa: 1200

Speed

Shutoff

Start of delivery block

Timing-device travel

Injection-pump setting values

Test specifications in parentheses

mm: 1.2

: A

Piston stroke

Outlet >

electromagnet>Volt:	12	İ	1st speed 1/min: Charge press. hPa:	
Inspection-pump tes	t enecifications	Ι	Shutoff	
Test specifications		Ι	electromagnet>Volt:	12
rest specifications	in parentheses	Ι	Overflow :	40 2 81 4
Timing-device chara	cteristic:	Ι	quantity> cm3/10s:	
Thing device chara	cter istic.	Ι	2nd speed 1/min:	
1st speed 1/min:	700	1	Charge press. hPa:	
Charge press hPa:		T.	Shutoff	1200
The travel	2 7 7 7	T	electromagnet>Volt:	10
TD travel mm:	(2.13.5)	T	Overflow :	1C /4 / 12E D
		T	quantity> cm3/10s:	
electromagnet>Volt:		Ť	quantity> cm3/10s:	(20.0140.0)
2nd speed 1/min:		Ť	Baldinami, minaka anal	Emandament about
Charge press hPa:	1200	†	Delivery—quant. and	breakaway char.
TD travel mm: > mm:	0.91.5	†		
> mm:	(0.67.8)	†	4 1 4	700
Shutoff	40	+	1nd speed 1/min:	
electromagnet>Volt:		†	Charge-air pressure	
3rd speed 1/min:		+	point> hPa:	
	1200	+	LDA-stroke mm:	••••
TD travel mm:		+	Shutoff	
	(2.103.10)	+	electromagnet>Volt:	12
Shutoff		+	Del. quantity cm3/:	83.084.0
electromagnet>Volt:	12	+	> 1000s.:	(79.587.5)
4th speed 1/min:	1400	+	2nd speed 1/min:	1650
Charge press hPa:		+	Charge press. hPa:	
TD travel mm:	3.03.6	1	Shutoff	
> mn:	(2.73.9)	1	electromagnet Volt:	12
Shutoff		1	Del. quantity cm3/:	
electromagnet>Volt:	12	1	> 1000s.:	
ottooti oilagi too votti		1	3rd speed 1/min:	
Supply-pump pressur	e characteristic:	1	Charge press. hPa:	
outher bumb by essui-	e character iscit.	Ι	Shutoff	1200
1st speed 1/min:	400	I	electromagnet>Volt:	12
Charge press. hPa:		I	Del. quantity cm3/:	
Supply-pump	1200	T	> 1000s.:	(17.047.0)
	4.04.6	T	4th speed 1/min:	
•	4.04.0	T		
Shutoff	42	T	Charge press. hPa:	1200
electromagnet>Volt:		Ť	Shutoff	40
2nd speed 1/min:		†	electromagnet>Volt:	
Charge press. hPa:	1200	+	Del. quantity cm3/:	
Supply-pump		†		(58.070.0)
	6.26.8	†	5th speed 1/min:	
Shutoff	4.0	+	Charge press. hPa:	1200
electromagnet>Volt:		+	Shutoff	
3rd speed 1/min:		+	electromagnet>Volt:	12
	1200	+	Del. quantity cm3/:	
Supply-pump		+		(88.096.0)
pressure> bar:	7.27.8	+	6th speed 1/min:	1050
Shutoff		+	Charge press. hPa:	1200
electromagnet>Volt:	12	+	Shutoff	
4th speed 1/min:	1400	+	electromagnet>Volt:	12
Charge press. hPa:	1200	+	Del. quantity cm3/:	92.097.0
Supply-pump		+		(90.598.5)
pressure> bar:	7.98.5	+	7th speed 1/min:	
Shutoff		+	Charge press. hPa:	
electromagnet>Volt:	12	+	Shutoff	
		+	electromagnet>Volt:	12
Overlow quantity at	overflow valve:	+	Del. quantity cm3/:	
The sem deminer of the		1		(93.599.5)

1/min: 500 8th speed Charge press. hPa: -Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.5...57.5 1000s.: (51.5...60.5) Mech. shutoff: 1/min: 1300 1st speed Charge press. hPa: 1200 Del. quantity cm3/: 0.0...3.0 1000s .: -Shutoff electromagnet>volt: 12 Electr. shutoff: 1st speed 1/min: 400 Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 380 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 13.0...17.0 1000s.: (10.0...20.0) cm3/: 7.0 Dispersion 1000s.: (7.0) 2nd speed 1/min: 480 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: -1/min: 250 3rd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.0...45.0 1000s.: (34.0...46.0) Automatic starting fuel delivery: 1st speed 1/min: 250 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 45.0...75.0 1000s.: -Shutoff electromagnet:

: 10.0

: 12.0

Mounting and assembly dimensions:

Designation

K mm: 3.6...3.8 ms1 1.4...1.7 ya mm: 35.0...39.0 yb mm: 41.9...47.1

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

:

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Cut-in

>min voltage

Rated voltage

Note inst. in remarks column

Test scheet : MAXION Edition : 22.03.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/12F1400R664 Type number : 0 460 424 127

Customer Part-No. :

Customer-specific information
Customer : MAXION

Engine : S4 EURO 1

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Start of delivery

Prestroke mm:
> (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1240 Setting value mm: 1.8...2.0

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1240

Setting value bar: 7.70...8.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 850

Del. quantity cm3/

> 1000s.: 69.5...70.5

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 > 10008:: (4.5)

Low-idle speed regulation

Speed 1/min: 380 Del. quantity cm3/

> 1000s.: 13.0...17.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (5.0)

Full-load speed regulation

Speed 1/min: 1550

Del. quantity cm3/

> 1000s.: 39.0...45.0

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 100.0...140.00

mind> 1000s.: 100.0

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

> mm: (0.6...1.8)

Shutoff

electromagnet>Volt: 12 3rd speed 1/min: 1400

TD travel mm: 1.80...2.40

K24

> mm:	(1.502.70)	electromagnet>Volt: 12
Shutoff	1	Del. quantity cm3/: 65.569.5
electromagnet>Volt:	12	> 1000s.: (64.071.0)
5.000 to 0.000	1	5th speed 1/min: 850
Supply-pump pressur	e characteristic:	Shutoff
oabbet bamb by coos		electromagnet>Volt: 12
1st speed 1/min:	500	Del. quantity cm3/: 69.570.5
	300 T	
Supply-pump	17 10	> 1000s.: (67.073.0)
	4.34.9	6th speed 1/min: 500
Shutoff	·	Shutoff
electromagnet>Volt:	12 +	electromagnet>Volt: 12
2nd speed 1/min:	1120 +	Del. quantity cm3/: 60.066.0
Supply-pump	+	> 1000s.: (58.068.0)
	7.27.8	
Shutoff	1	
electromagnet>Volt:	12	
3rd speed 1/min:	12/0	Electr. shutoff:
	1240	Lecti. Shutoii.
Supply-pump	7.78.3	1-t amount 1/-2- 77E
	7.7	1st speed 1/min: 375
Shutoff	·	Del. quantity cm3/: 0.003.00
electromagnet>Volt:		> 1000s.: (0.003.00)
4th speed 1/min:	1400 +	Shutoff
Supply-pump	+	electromagnet>volt: -
pressure> bar:	8.59.1	
Shutoff	1	Idle delivery:
electromagnet>Volt:	12	auto uccivoly:
e cec ci dilagnet voca.	1	1st speed 1/min: 380
Overlas avendadas ed	T T	
Overlow quantity at	overflow valve:	Shutoff
	†	electromagnet>Volt: 12
1st speed 1/min:	500 +	Del. quantity cm3/: 13.017.0
Shutoff	+	> 1000s.: (11.019.0)
electromagnet>Volt:	12 +	Dispersion cm3/: 4.0
Overflow :	38.879.6	> 1000s.: (5.0)
quantity> cm3/10s:	(23.894.6)	2nd speed 1/min: 300
2nd speed 1/min:		Shutoff
Shutoff	1990	electromagnet>Volt: 12
	12	
electromagnet>Volt:	16 ADE D	Del. quantity cm3/: 45.053.0
	41.6125.0	> 1000s.: (43.055.0)
quantity> cm3/10s:	(26.6140.0)	3rd speed 1/min: 450
	+	Shutoff
Delivery-quant. and	breakaway char.: +	electromagnet>Volt: 12
	+	Del. quantity cm3/: 0.006.00
	+	> 1000s.: (0.006.00)
1nd speed 1/min:	1730	
Shutoff	1	Automatic starting fuel delivery:
electromagnet>Volt:	12	
Del. quantity cm3/:		1st speed 1/min: 250
1000011		Shutoff
2nd speed 1/min:	1650 +	electromagnet>Volt: 12
Shutoff	+	Del. quantity cm3/: 45.085.0
electromagnet Volt:		> 1000s.: -
Del. quantity cm3/:	13.027.0	
	(10.030.0)	Shutoff electromagnet:
3rd speed 1/min:		
Shutoff	1	Cut-in
electromagnet>Volt:	12	>min voltage : 10.0
Dol guartity and/	30 0 45 0 T	
Del. quantity cm3/:		Rated voltage : 12.0
	(36.048.0)	88 4
4th speed 1/min:	1350 +	Mounting and assembly dimensions:
Shutoff	+	
K25		

Designation

K mm: 3.6...3.8

KF mm: -

MS1 mm: 1.4...1.7 Ya mm: 33.0...35.0 Yb mm: 42.8...51.2

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : MWM

Edition : 14.03.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/12F1400R666

Type number : 0 460 424 128

Customer Part-No. :

Customer-specific information

Customer : MWM

Engine : 4.10 NA VW7100

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery

Prestroke mm:
> (from BDC): -

Start of delivery block
Piston stroke mm: 1.0
Outlet > : A

Injection-pump setting values Test specifications in parentheses

Timing-device travel

Speed 1/min: 1150 Setting value mm: 1.9...2.1

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1150

Setting value bar: 7.30...7.90

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 850

Del. quantity cm3/

> 1000s.: 69.5...70.5

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 > 10008:: (5.0)

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

> 1000s.: 17.5...21.5

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (5.0)

Full-load speed regulation

Speed 1/min: 1550

Del. quantity cm3/

> 1000s.: 44.0...50.0

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 75.0...115.00

mind> 1000s.: 75.0

Shutoff

electromagnet>Volt: 12

Inspection—pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 1000

TD travel mm: 0.7...1.3 mm: (0.4...1.6)

TD travel mm: 1.9...2.1 mm: (1.5...2.5)

Shutott		+	Del. quantity cm3/: 44.050.0
electromagnet>Volt:		+	> 1000s.: (41.053.0)
3rd speed 1/min:	1400	+	4th speed 1/min: 1400
TD travel mm:	3.203.80	+	Shutoff
	(2.904.10)	1	electromagnet>Volt: 12
Shutoff	(21)0111 1110)	1	Del. quantity cm3/: 68.072.0
	13	T	> 1000s.: (66.573.5)
electromagnet>Volt:	12	T	
		†	5th speed 1/min: 850
Supply-pump pressur	e characteristic:	+	Shutoff
		+	electromagnet>Volt: 12
1st speed 1/min:	500	+	Del. quantity cm3/: 69.570.5
Supply-pump		+	> 1000s.: (67.073.0)
	4.45.0	1	6th speed 1/min: 500
Shutoff	4.4	\mathbf{I}	Shutoff
	45	T	
electromagnet>Volt:		Ť	electromagnet>Volt: 12
2nd speed 1/min:	7000	+	Del. quantity cm3/: 53.059.0
Supply-pump		+	> 1000s.: (51.061.0)
pressure> bar:	6.77.3	+	
Shutoff		+	
electromagnet>Volt:	12	1	
3rd speed 1/min:		1	Electr. shutoff:
	1150	T	Etecti. Shutoff.
Supply-pump	77 70	Ť	4 1 4 1 100
	7.37.9	†	1st speed 1/min: 400
Shutoff		+	Charge press. hPa: -
electromagnet>Volt:	12	+	Del. quantity cm3/: 0.003.00
4th speed 1/min:	1400	1	> 1000s.: (0.003.00)
Supply-pump	1400	1	Shutoff
	° / 0 0	T	
Y .	8.49.0	Ť	electromagnet>volt: -
Shutoff		+	
<pre>electromagnet>Volt:</pre>	12	+	Idle delivery:
		+	
Overlow quantity at	overflow valve:	+	1st speed 1/min: 400
over ten quartere, as		1	Shutoff
1st speed 1/min:	500	1	electromagnet>Volt: 12
	300	T	Del. quantity cm3/: 17.521.5
Shutoff	40	T	10000 - (45 521.5
electromagnet>Volt:	12	+	> 1000s.: (15.523.5)
	40.281.4	+	Dispersion cm3/: 4.0
quantity> cm3/10s:	(25.296.4)	+	> 1000s.: (5.0)
2nd speed 1/min:	1400	1	2nd speed 1/min: 320
Shutoff		1	Shutoff
electromagnet>Volt:	12	1	electromagnet>Volt: 12
etectromagnet-vott.	14 4 405 0	T	
	41.6125.0	Ť	Del. quantity cm3/: 43.051.0
quantity> cm3/10s:	(26.6140.0)	+	> 1000s.: (41.053.0)
		+	3rd speed 1/min: 480
Delivery-quant. and	breakaway char.:	+	Shutoff
•	•	+	electromagnet>Volt: 12
		1	Del. quantity cm3/: 0.006.00
1nd speed 1/min:	1770		> 1000s.: (0.006.00)
•	1730	T	/ 10003.: (0.000.00)
Shutoff	40	Ť	A A
electromagnet>Volt:	12	+	Automatic starting fuel delivery:
Del. quantity cm3/:	0.03.0	+	
> 1000s.:	Ween.	+	1st speed 1/min: 250
2nd speed 1/min:	1650	1	Shutoff
Shutoff		1	electromagnet>Volt: 12
	10	T	Del. quantity cm3/: 35.075.0
electromagnet Volt:	47.0 27.0	T	
Del. quantity cm3/:		+	> 1000s.: -
	(10.030.0)	+	
3rd speed 1/min:	1550	+	Shutoff electromagnet:
Shutoff		+	
electromagnet>Volt:	12	1	Cut-in
cecer omagnets vote.	• •	1	www 111

>min voltage : 10.0 Rated voltage : 12.0

Mounting and assembly dimensions:

Designation

K KF mm: 3.6...3.8

mm: -

mm: 1.4...1.7 MS1 mm: 37.3...39.3 mm: 34.0...44.7 Ya Yb

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

:

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

1/min: 1150 Speed Setting value mm: 1.9...2.1 BOSCH-INJ.-PUMP TEST SPECIFICATIONS Shutoff Note inst. in remarks column electromagnet>Volt: 12 Test scheet : MWM Supply-pump pressure Edition : 14.03.96 replaces Speed 1/min: 1150 Calibrating oil Setting value bar: 7.30...7.90 : ISO-4113 Shutoff Injection pump : VE4/12F1500R667 electromagnet>Volt: 12 Type number : 0 460 424 129 Customer Part-No. : Full-load del. w/out charge press.: 1/min: 850 Speed Customer-specific information Del. quantity cm3/ Customer : MUM > 1000s.: 69.5...70.5 Shutoff Engine : 4.10 NA F1000 electromagnet>Volt: 12 cm3/: 4.0Dispersion 1000s.: (5.0) TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Low-idle speed regulation 1/min: 400 Speed Calibrating-oil return>temp. > °C Del. quantity cm3/ 1000s.: 15.5...19.5 with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.5 Inlet press., bar : 0.30...0.40 1000s.: (5.0) Calibrating nozzle-holder : 1 688 901 109 Full-load speed regulation assembly> 1/min: 1670 Speed Opening | bar: 204.00...210.00 Del. quantity cm3/ Pressure> 1000s.: 42.0...48.0 > Shutoff Perforated-plate diameter> mm: 0.5 electromagnet>Volt: 12 Start: Test inj. tubing : 1 680 750 017 1/min: 100 Speed Del. quantity cm3/: 75.0...115.00 Outside diameter : 6.00 x Wall>thickness : 2.00 1000s.: 75.0 mm: 840 Shutoff x Length> electromagnet>Volt: 12 Start of delivery Inspection-pump test specifications mm: -Prestroke Test specifications in parentheses (from BDC): -Timing-device characteristic: Start of delivery block Piston stroke mm: 1.0 Outlet > 1st speed 1/min: 1000 mm: 0.7...1.3 TD travel mm: (0.4...1.6) Injection-pump setting values Test specifications in parentheses electromagnet>Volt: 12 1/min: 1150 2nd speed

TD travel

mm: 1.9...2.1 mm: (1.5...2.5)

Timing-device travel

Shutoff		+ Del. quantity cm3/: 67.071.0
electromagnet>Volt:		+ > 1000s.: (65.572.5)
3rd speed 1/min:	1400	+ 4th speed 1/min: 850
	3.203.80	+ Shutoff
	(2.904.10)	+ electromagnet>Volt: 12
Shutoff	•	Del. quantity cm3/: 69.570.5
electromagnet>Volt:	12	+ > 1000s.: (67.073.0)
		+ 5th speed 1/min: 500
Supply-pump pressure	e characteristic:	+ Shutoff
	500	+ electromagnet>Volt: 12
1st speed 1/min:	500 -	Del. quantity cm3/: 53.059.0
Supply-pump	4.45.0	> 1000s.: (51.061.0)
pressure> bar: Shutoff	4.45.0	
electromagnet>Volt:	10	I
2nd speed 1/min:		Electr. shutoff:
Supply-pump	1000	
	6.77.3	1st speed 1/min: 400
Shutoff		Charge press. hPa: -
electromagnet>Volt:	12	Del. quantity cm3/: 0.003.00
3rd speed 1/min:	1150	> 1000s.: (0.003.00)
Supply-pump	-	+ Shutoff
	7.37.9	+ electromagnet>volt: -
Shutoff	-	†
electromagnet>Volt:	12 .	† Idle delivery:
4th speed 1/min:	1400 -	†
Supply-pump	-	1st speed 1/min: 400
•	8.49.0	Shutoff
Shutoff	45	electromagnet>Volt: 12
electromagnet>Volt:	12 -	Del. quantity cm3/: 15.519.5 > 1000s.: (13.521.5)
	avantlas valvas	+ Dispersion cm3/: 4.0
Overlow quantity at	over tow valve:	1000s.: (5.0)
1st speed 1/min:	500	2nd speed 1/min: 290
Shutoff	-	Shutoff
electromagnet>Volt:	12	electromagnet>Volt: 12
Overflow :	40.281.4	Del. quantity cm3/: 23.031.0
quantity> cm3/10s:		> 1000s.: (21.033.0)
2nd speed 1/min:	1500 -	3rd speed 1/min: 500
Shutoff	-	Shutoff
electromagnet>Volt:		electromagnet>Volt: 12
Overflow :	41.6125.0	Del. quantity cm3/: 0.006.00
quantity> cm3/10s:	(26.6140.0)	> 1000s.: (0.006.00)
0-14	haratara ahan	
Delivery-quant. and	breakaway char.: -	Automatic starting fuel delivery:
		1st speed 1/min: 250
1nd speed 1/min:	1840	Shutoff
Shutoff	1040	electromagnet>Volt: 12
electromagnet>Volt:	12	Del. quantity cm3/: 35.075.0
Del. quantity cm3/:		> 1000s.: -
> 1000s.:		
and speed 1/min:		Shutoff electromagnet:
Shutoff	-	-
electromagnet Volt:	12	- Cut-in
Del. quantity cm3/:	12.026.0	>min voltage : 10.0
	(9.029.0)	Rated voltage : 12.0
3rd speed 1/min:	7500 -	
Shutoff	1	Mounting and assembly dimensions:
electromagnet>Volt:	72 +	

Designation

K mm: 3.6...3.8 KF mm: — MS1 mm: 1.4...1.7 Ya mm: 39.0...41.

Ya mm: 39.0...41.0 Yb mm: 40.8...49.2

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : MWM Edition : 14.03.96

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/12F1500R668 Type number : 0 460 424 130

Customer Part-No. :

Customer-specific information

Customer : MWM

: 4.10 T EURO IF 1000T Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1200 Charge press. hPa: 1200

Setting value mm: 3.1...3.3

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200 hPa: 1200 Charge press

Setting value bar: 7.30...7.90

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 850 Charge press. hPa: 1200

Del. quantity cm3/

1000s.: 91.5...92.5

Shutoff

electromagnet>Volt: 12 cm3/: 4.0 Dispersion 1000s.: (5.0)

Full-load del. w/out charge press.:

1/min: 500

Del. quantity cm3/

1000s.: 49.5...53.5

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 390 Charge press hPa: -Del. quantity cm3/

1000s.: 5.0...9.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 1000s.: (5.0)

Full-load speed regulation

1/min: 1650 Speed Charge press hPa: 1200

Del. quantity cm3/

1000s.: 67.0...73.0

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Charge press hPa: -

Del. quantity cm3/: 63.00...103.00

1000s.: 63.00 mind>

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 1000

	1200	+		
	1.11.7	†	4 1 44 .	700
	(0.82.0)	+	1nd speed 1/min:	
electromagnet>Volt:	12	†	Charge-air pressure	
2nd speed 1/min:		†	•	500
Charge press hPa:	1200	†	LDA-stroke mm:	
	3.13.3	†	Shutoff	40
	(2.73.7)	†	electromagnet>Volt:	12
Shutoff	40	†	Del. quantity cm3/:	(4.5(7.5
electromagnet>Volt:	12	†		(72.080.0)
3rd speed 1/min:		+	2nd speed 1/min:	
	1200	†	Charge press. hPa:	1200
	4.605.20	†	Shutoff	
	(4.305.50)	†	electromagnet Volt:	12
Shutoff	40	†	Del. quantity cm3/:	
electromagnet>Volt:	12	†	> 1000s.:	
	- 1	†	3rd speed 1/min:	
Supply-pump pressur	e characteristic:	†	Charge press. hPa:	1200
	500	†	Shutoff	40
1st speed 1/min:		†	electromagnet>Volt:	
- ,	1200	†	Del. quantity cm3/:	
Supply-pump	/ 3 / 0	†		(19.039.0)
• • • • • • • • • • • • • • • • • • • •	4.24.8	†	4th speed 1/min:	
Shutoff	12	†	Charge press. hPa:	1200
electromagnet>Volt:	12	†	Shutoff	42
2nd speed 1/min:		†	electromagnet>Volt:	
- .	1200	†	Del. quantity cm3/:	
Supply-pump		†		(64.076.0)
•	6.57.1	†	5th speed 1/min:	
Shutoff	40	†	Charge press. hPa:	1200
electromagnet>Volt:	12	†	Shutoff	40
3rd speed 1/min:		†	electromagnet>Volt:	
— •	1200	+	Del. quantity cm3/:	90.094.0 (80.5 OF 5)
Supply-pump	77 70	†		(88.595.5)
· .	7.37.9	†	6th speed 1/min:	
Shutoff	10	†	Charge press. hPa:	1200
electromagnet>Volt:		†	Shutoff	12
4th speed 1/min:		Ť	electromagnet>Volt:	1C
Charge press. hPa:	1200	Ť	Del. quantity cm3/: > 1000s:	(87.097.0)
Supply-pump	01 07	Ť		
•••	8.18.7	T		
Shutoff	10	Ť	Charge press. hPa: Shutoff	1200
electromagnet>Volt:	12	T	electromagnet>Volt:	12
Overlow quantity at	overflow valves	Ι	Del. quantity cm3/:	01 5 02 5
overtow quantity at	over itow vacve.	Ι	> 1000s.:	(89.095.0)
1st speed 1/min:	500	Ι	8th speed 1/min:	
Charge press. hPa:		Ι	Charge press. hPa:	
Shutoff	-	Ι	Shutoff	
	10	I	electromagnet>Volt:	12
<pre>electromagnet>Volt: Overflow :</pre>	40.281.4	Ι	Del. quantity cm3/:	
quantity> cm3/10s:		I		(47.055.5)
2nd speed 1/min:		Ι	/ 10005	(47.01)
Charge press. hPa:		I		
Shutoff	1200	1		
electromagnet>Volt:	12	I	Electr. shutoff:	
	36.10119.40	I	Lecti. Shuturi.	
quantity> cm3/10s:		I	1st speed 1/min:	400
quartity/ cm3/105:	C 14 10 EJT. TU/	1	Charge press. hPa:	
Delivery-quant. and	hreakaway char.:	1	Del. quantity cm3/:	
DELIVERY CHOILE BIN	-: CARUMAI VIIGI * *	,	waaritity till.	

1000s.: (0.00...3.00) > Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 390 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 5.0...9.0 > 1000s.: (3.0...11.0) cm3/: 4.0 Dispersion 1000s.: (5.0) 1/min: 300 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 22.0...30.0 > 1000s.: (20.0...32.0) 3rd speed 1/min: 450 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 250 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 30.0...70.0 1000s .: -Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: mm: 1.3...1.6 MS1 mm: 39.5...41.5 Ya mm: 40.8...49.2 Yb Remarks: : Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed position

Measurement point = edge of control lever on distributor—head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : MWM Edition : 14.03.96 replaces Calibrating oil : ISO-4113 Injection pump : VE4/12F1300R669 Type number : 0 460 424 131 Customer Part-No. : Customer-specific information Customer : MWM : 4.10 T EURO I VW8140 Engine TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 109 assembly> Opening | bar: 204.00...210.00 Pressure> Perforated-plate diameter> mm: 0.5 Test ini. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840 Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 1200

Charge press. hPa: 1200 Setting value mm: 3.1...3.3

electromagnet>Volt: 12

Supply-pump pressure

electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 850 Speed Charge press. hPa: 1200 Del. quantity cm3/ 1000s.: 91.5...92.5 Shutoff electromagnet>Volt: 12 Dispersion cm3/: 4.0 1000s.: (5.0) Full-load del. w/out charge press.: Speed 1/min: 500 Del. quantity cm3/ 1000s.: 49.5...53.5 Shutoff electromagnet>Volt: 12 Low-idle speed regulation Speed 1/min: 400 Charge press hPa: -Del. quantity cm3/ 1000s.: 8.0...12.0 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 3.5 1000s.: (5.0) Full-load speed regulation Speed 1/min: 1530 hPa: 1200 Charge press Del. quantity cm3/ 1000s.: 65.0...71.0 Shutoff electromagnet>Volt: 12 Start: 1/min: 100 Speed Charge press hPa: -Del. quantity cm3/: 63.00...103.00 mind> 1000s.: 63.00 Shutoff electromagnet>Volt: 12 Inspection-pump test specifications Test specifications in parentheses Timing-device characteristic:

1st speed

1/min: 1000

1/min: 1200

Setting value bar: 7.30...7.90

hPa: 1200

Speed

Shutoff

Charge press

Speed

Shutoff

Charge press hPa:	1200	+		
TD travel mm:	1.11.7 (0.82.0)	†	1nd aread 1/min	700
electromagnet>Volt:		I	<pre>1nd speed 1/min: Charge-air pressure</pre>	
2nd speed 1/min:	1200	I		500
	1200	I	LDA-stroke mm:	
	3.13.3	1	Shutoff	
	(2.73.7)	1	electromagnet>Volt:	12
Shutoff		+	Del. quantity cm3/:	74.577.5
electromagnet>Volt:	12	+	> 1000s.:	(72.080.0)
3rd speed 1/min:		+	2nd speed 1/min:	
	1200	+	Charge press. hPa:	1200
	4.605.20	+	Shutoff	
	(4.305.50)	+	electromagnet Volt:	
Shutoff	43	†	Del. quantity cm3/:	0.003.00
electromagnet>Volt:	12	Ť	> 1000s.: 3rd speed 1/min:	
Supply-pump pressur	e characteristic:	I	Charge press. hPa:	
adpry built bi essui	e character istre.	I	Shutoff	1200
1st speed 1/min:	500	1	electromagnet>Volt:	12
	1200	1	Del. quantity cm3/:	
Supply-pump		+		(19.039.0)
pressure> bar:	4.24,8	+	4th speed 1/min:	
Shutoff		+	Charge press. hPa:	1200
electromagnet>Volt:	12	+	Shutoff	
2nd speed 1/min:		+	electromagnet>Volt:	
- .	1200	†	Del. quantity cm3/:	
Supply-pump	45 71	Ť		(62.074.0)
pressure> bar: Shutoff	6.57.1	Ī	5th speed 1/min: Charge press. hPa:	
electromagnet>Volt:	12	I	Shutoff	1200
3rd speed 1/min:		1	electromagnet>Volt:	12
Charge press. hPa:		1	Del. quantity cm3/:	
Supply-pump		+		(91.098.0)
pressure> bar:	7.37.9	+	6th speed 1/min:	
Shutoff		+	Charge press. hPa:	1200
electromagnet>Volt:	12	+	Shutoff	
4th speed 1/min:		+	electromagnet>Volt:	
Charge press. hPa:	7200	†	Del. quantity cm3/:	
Supply-pump	8.18.7	T		(87.097.0)
pressure> bar: Shutoff	0.10.7	+++++++++++++++++++++++++++++++++++++++	7th speed 1/min: Charge press. hPa:	
electromagnet>Volt:	12	I	Shutoff	1200
cteder amagricus votti.		1	electromagnet>Volt:	12
Overlow quantity at	overflow valve:	+	Del. quantity cm3/:	91.592.5
		+	> 1000s.:	(89.095.0)
1st speed 1/min:		+	8th speed 1/min:	
Charge press. hPa:	-	+	Charge press. hPa:	-
Shutoff	4.00	+	Shutoff	40
electromagnet>Volt:		+	electromagnet>Volt:	
Overflow : quantity> cm3/10s:	38.883.3	†	Del. quantity cm3/: > 1000s:	(47.055.5)
2nd speed 1/min:		Ι	7 10003.:	(47.0)
Charge press. hPa:		I		
Shutoff	1200	1		
electromagnet>Volt:	12	1	Electr. shutoff:	
	36.10119.40	+		
quantity> cm3/10s:		+	1st speed 1/min:	
		+	Charge press. hPa:	
Delivery-quant, and	breakaway char.:	+	Del. quantity cm3/:	0.003.00

1000s.: (0.00...3.00) > Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 400 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 8.0...12.0 1000s.: (6.0...14.0) cm3/: 4.0 Dispersion 1000s.: (5.0) 1/min: 325 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 28.0...38.0 > 1000s.: (27.0...39.0) 3rd speed 1/min: 430 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1st speed 1/min: 250 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 63.0...103.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: mm: 1.3...1.6 MS1 mm: 45.5...46.5 Ya mm: 36.3...44.7 Yb Remarks: Ya = Distance between VE flange and speed-control lever in idle Measurement point = edge of control Lever on drive end Yb = Distance between VE flange and

speed-control lever in rated speed

Measurement point = edge of control lever on distributor—head end

position

Note inst. in remarks column

Test scheet : MAX Edition : 14.03.96

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/12F1400R682 Type number : 0 460 424 133

Customer Part-No. :

Customer-specific information Customer : MAXION

Engine : S4T-PLUS-EURO I

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1150 Charge press. hPa: 1400 Setting value mm: 2.4...2.6

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1150 Charge press hPa: 1400

Setting value bar: 6.70...7.30

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 950 Charge press. hPa: 1400

Del. quantity cm3/

> 1000s.: 95.0...96.0

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 > 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 74.5...78.5

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

Speed 1/min: 350 Charge press hPa: -

Del. quantity cm3/

> 1000s.: 22.0...26.0

Shutoff

Full-load speed regulation

Speed 1/min: 1570 Charge press hPa: 1400

Del. quantity cm3/

> 1000s.: 59.5...65.5

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100 Charge press hPa: -

Del. quantity cm3/: 125.0...165.0

mind> 1000s.: 125.0

Shutoff

electromagnet>Volt: 12

Inspection—pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 950

	1400	+		
TD travel mm:	0.91.5	+		750
	(0.61.8)	†	1nd speed 1/min:	
electromagnet>Volt:		†	Charge-air pressure	
2nd speed 1/min:	1400	Ť		750 _
	2.42.6	I	LDA-stroke mm: Shutoff	_
	(2.03.0)	Ι	electromagnet>Volt:	12
Shutoff	(2.05.0)	I	Del. quantity cm3/:	84.088.0
electromagnet>Volt:	12	1	> 1000s.:	(81.590.5)
3rd speed 1/min:	1350	1	2nd speed 1/min:	
	1400	1	Charge press. hPa:	
	3.103.70	1	Shutoff	
> mm:	(2.804.00)	+	electromagnet Volt:	12
Shutoff		+	Del. quantity cm3/:	
electromagnet>Voit:	12	+	> 1000s.:	_
_		+	3rd speed 1/min:	1700
Supply-pump pressur	e characteristic:	+	Charge press. hPa:	1400
		+	Shutoff	
1st speed 1/min:		+	electromagnet>Volt:	12
Charge press. hPa:	1400	+	Del. quantity cm3/:	
Supply-pump		+		(28.548.5)
pressure> bar:	3.94.5	+	4th speed 1/min:	
Shutoff		+	Charge press. hPa:	1400
electromagnet>Volt:	12	+++++++++++++++++++++++++++++++++++++++	Shutoff	
2nd speed 1/min:		+	electromagnet>Volt:	12
Charge press. hPa:	1400	+	Del. quantity cm3/:	59.565.5
Supply-pump		+		(56.568.5)
• 1	5.96.5	+	5th speed 1/min:	
Shutoff	40	+	Charge press. hPa:	1400
electromagnet>Volt:		+	Shutoff	40
3rd speed 1/min:		†	electromagnet>Volt:	12
Charge press. hPa:	1400	†	Del. quantity cm3/:	92.096.0
Supply-pump	47 77	†		(90.597.5)
	6.77.3	7	6th speed 1/min:	
Shutoff	12	T	Charge press. hPa: Shutoff	1400
electromagnet>Volt: 4th speed 1/min:		Ť		12
Charge press. hPa:		I	<pre>electromagnet>Volt: Del. quantity cm3/:</pre>	
	1400	Ι	> quartity clist:	(92.598.5)
Supply-pump pressure> bar:	7.58.1	I	7th speed 1/min:	
Shutoff	7.5.,.0.1	Ι	Charge press. hPa:	1400
electromagnet>Volt:	12	Ι	Shutoff	1700
e teet i ondgriet vott.		1	electromagnet>Volt:	12
Overlow quantity at	overflow valve:	1	Del. quantity cm3/:	99.0105.0
over ten quarter ty at		1	> 1000s.:	(97.0107.0)
1st speed 1/min:	500	T + + + + + + + + + + + + + + + + + + +	8th speed 1/min:	
Charge press. hPa:		1	Charge press. hPa:	
Shutoff		1	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	12
	38.883.3	+	Del. quantity cm3/:	
quantity> cm3/10s:	(23.898.3)	+	> 1000s.:	(72.081.0)
2nd speed 1/min:	1300	+		
Charge press. hPa:		+		
Shutoff		+		
electromagnet>Volt:		+	Electr. shutoff:	
Overflow :	36.10119.40	+		
quantity> cm3/10s:	(21.10134.40)	+	1st speed 1/min:	
		+	Charge press. hPa:	
Delivery-quant. and	breakaway char.:	+	Del. quantity cm3/:	บ.นบ3.00

> 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 350 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 22.0...26.0 1000s.: (20.0...28.0) cm3/: 4.0 Dispersion 1000s.: (5.0) > 1/min: 270 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 49.0...57.0 1000s.: (47.0...59.0) 1/min: 450 3rd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 250 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.0...105.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: -MS1 mm: 1.2...1.5 mm: 28.0...30.0 Ya mm: 45.8...54.2 Yb Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end Yb = Distance between VE flange and speed-control lever in rated speed

Measurement point = edge of control lever on distributor-head end

position

Note inst. in remarks column

Test scheet : MAN Edition : 25.03.96

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/12F1200R568-1

Type number : 0 460 424 134

Customer Part-No. :

Customer-specific information

Customer : MAN

Engine : D 0824 LF01

Power KW: 114

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 110

Opening

Pressure> bar: 247.00...253.00

Perforated-plate

diameter> mm: 0.5

Test inj, tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Start of delivery
Prestroke mm: > (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 850 Charge press. hPa: 1500 Setting value mm: 2.0...2.4

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

Speed 1/min: 850 Charge press hPa: 1500

Setting value bar: 6.40...7.00

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

Speed 1/min: 1000 Charge press. hPa: 1500

Del. quantity cm3/

> 1000s.: 107.5...108.5

Shutoff

electromagnet>Volt: 24
Dispersion cm3/: 4.0
> 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 550

Del. quantity cm3/

> 1000s.: 60.5...61.5

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

> 1000s.: 13.0...17.0

Shutoff

electromagnet>Volt: 24
Del. quantity cm3/: 6.0
> 10008:: (6.5)

Full-load speed regulation

Speed 1/min: 1300 Charge press hPa: 1500

Del. quantity cm3/

> 1000s.: 72.0...78.0

Shutoff

electromagnet>Volt: 24

Start:

Speed 1/min: 100

Del. quantity cm3/: 105.0...165.0

mind> 1000s.: 105.0

Shutoff

electromagnet>Volt: 24

Inspection-pump test specifications Test specifications in parentheses

		+		
Timing-device chara	cteristic:	+	Delivery-quant. and	breakaway char.:
1st speed 1/min:	750	†		
Charge press hPa:		I	1nd speed 1/min:	550
TD travel mm:	07 15	I	Charge-air pressure	
	(0.41.8)	1	point> hPa:	
electromagnet>Volt:		1	LDA-stroke mm:	
2nd speed 1/min:		1	Shutoff	7.0
Charge press hPa:		1	electromagnet>Volt:	24
TO travel mm:	2.02.4	+	Del. quantity cm3/:	80.581.5
	(1.52.9)	+	> 1000s.:	(78.583.5)
Shutoff		+	2nd speed 1/min:	
electromagnet>Volt:	24	+	Charge press. hPa:	
3rd speed 1/min:		+	Shutoff	
Charge press hPa-	1500	+	electromagnet Volt:	24
TD travel mm:	3.604.40	+	Del. quantity cm3/:	
> mn:	(3.304.70)	+	> 1000s.:	-
Shutoff		+	3rd speed 1/min:	1340
electromagnet>Volt:	24	+	Charge press. hPa:	1500
4th speed 1/min:		+	Shutoff	
	1500	+	electromagnet>Volt:	
TD travel mm:	4.55.3	+	Del. quantity cm3/:	
> mm:		+	> 100 0 s.:	
		+	4th speed 1/min:	
Supply-pump pressur	e characteristic:	+	Charge press. hPa:	1500
		+	Shutoff	
1st speed 1/min:		+	electromagnet>Volt:	
Charge press. hPa:	1500	+	Del. quantity cm3/:	
Supply-pump		+	> 1000s.:	
•	4.95.5	+	5th speed 1/min:	
Shutoff	04	+	Charge press. hPa:	1500
electromagnet>Volt:		+	Shutoff	21
2nd speed 1/min:		+	electromagnet>Volt:	400 5 405 5
• •	1500	†	Del. quantity cm3/:	
Supply-pump	4 / 70	T	> 1000S.: 6th speed 1/min:	(99.0107.0)
	6.47.0	T		
Shutoff	24	T	Charge press. hPa: Shutoff	טטכז
electromagnet>Volt: 3rd speed 1/min:	1200	T	electromagnet>Volt:	2/.
Charge press. hPa:		I	Del. quantity cm3/:	107 5 108 5
	1500	I	> 1000s.:	(105.5110.5)
Supply-pump pressure> bar:	8.28.8	I	7th speed 1/min:	
Shutoff	0.2	I	Charge press. hPa:	
electromagnet>Volt:	24	I	Shutoff	1200
eterti omagneti vote.		1	electromagnet>Volt:	24
Overlow quantity at	overflow valve:	1	Del. quantity cm3/:	
over ton quarterey at	Over teem variou	1		(109.5118.5)
1st speed 1/min:	550	1	8th speed 1/min:	
Charge press. hPa:		+	Charge press. hPa:	
Shutoff		1	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	24
Overflow :	75.0119.4	+	Del. quantity cm3/:	110.0115.0
quantity> cm3/10s:	(60.0134.4)	+	> 1000s.:	(107.0118.0)
2nd speed 1/min:	1200	+	9th speed 1/min:	
Charge press. hPa:		+	Charge press. hPa:	
Shutoff		+	Shutoff	
electromagnet>Volt:		+	electromagnet>Volt:	
Overflow :	97.2180.5	+	Del. quantity cm3/:	
quantity> cm3/10s:	(82.2195.5)	+	> 1000s.:	(58.064.0)

10th speed 1/min: 550 Charge press. hPa: 1500 Shutoff electromagnet: Shutoff electromagnet>Volt: 24 Cut-in Del. quantity cm3/: 109.5...118.5 >min voltage : 20.0 1000s.: (108.0...129.0) Rated voltage : 24.0 Mounting and assembly dimensions: Mech. shutoff: Designation 1/min: 1200 1st speed mm: 3.6...3.8 Charge press. hPa: 1500 KF mm: -Del. quantity cm3/: 0.0...3.0 mm: 1.3...1.6 MS1 1000s .: -LDA stroke mm: 7.6 mm: KSB 7.1MM Shutoff FΗ mm: 37.4...40.4 electromagnet>volt: 24 Ya mm: 35.4...40.6 Yb Electr. shutoff: Remarks: 1/min: 400 1st speed Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 Ya = Distance between VE flange and 1000s.: (0.00...3.00) speed-control lever in idle Shutoff position Measurement point = edge of control electromagnet>volt: -Lever on drive end Idle delivery: 1/min: 400 Yb = Distance between VE flange and 1st speed Shutoff speed-control lever in rated speed electromagnet>Volt: 24 position Del. quantity cm3/: 13.0...17.0 Measurement point = edge of control 1000s.: (10.0...20.0) Lever on distributor-head end > cm3/: 6.0Dispersion > 1000s.: (6.5) 1/min: 500 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.0...3.0 1000s.: -Automatic starting fuel delivery: 1/min: 430 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 48.0...88.0 1000s.: -2nd speed 1/min: 330 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 75.0...105.0 1000s.: -3rd speed 1/min: 100 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 44.0...46.0

1000s.: -

Timing-device travel BOSCH-INJ.-PUMP TEST SPECIFICATIONS 1/min: 900 Note inst. in remarks column Charge press. hPa: 1000 Setting value mm: 1.20...1.60 : CDC Test scheet Shutoff Edition : 12.02.96 electromagnet>Volt: 24 replaces Calibrating oil : ISO-4113 Supply-pump pressure 1/min: 900 Injection pump : VE6/12F1250R498-4 Speed Charge press hPa: 1000 Type number : 0 460 426 245 Customer Part-No.: 3 282 753 Setting value bar: 5.90...6.50 Shutoff Customer-specific information electromagnet>Volt: 24 Customer : CDC EURO2 Full-load del. with charge press.: : 6 BTAA 5,9 B DI Engine 1/min: 850 Speed KW: 107 Power Charge press. hPa: 1000 1/min: 2500 Del. quantity cm3/ Speed 1000s.: 82.50...83.50 > TEST BENCH REQUIREMENTS Shutoff electromagnet>Volt: 24 Dispersion cm3/: 5.0 Overflow restricti: 1 463 456 303 1000s.: (5.0) Calibrating-oil Full-load del. w/out charge press.: return>temp. > °C with>thermometer> : 44.00...46.00 1/min: 500 Speed Inlet press., bar : 0.30...0.40 Del. quantity cm3/ > 1000s.: 69.00...70.00 Calibrating nozzle-holder Shutoff : 1 688 901 109 assembly> electromagnet>Volt: 24 Dispersion cm3/: 5.0 1000s.: (5.0) Opening bar: 204.00...210.00 Pressure> Low-idle speed regulation Perforated-plate diameter> mm: 0.5 Speed 1/min: 330 Del. quantity cm3/ 1000s.: 7.0...11.0 Test inj. tubing : 1 680 750 017 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 5.5 Outside diameter : 6.00 x Wall>thickness : 2.00 1000s.: (7.0) x Length> mm: 840 Full-load speed regulation Start of delivery 1/min: 1380 Prestroke mm: -Speed Charge press hPa: 1000 > (from BDC): -Del. quantity cm3/ 1000s.: 60.0...66.0 Start of delivery block mm: 1.4 Piston stroke Shutoff electromagnet>Volt: 24 > mm: +-0.02(0.06)Outlet > : D Start: Injection-pump setting values Test specifications in parentheses 1/min: 100 Speed

Charge press hPa: -

Del. quantity cm3/: 110.01	50.0	Supply-pum	n	
mind> 1000s.: 130.0	70.0	pressure>		7.27.8
	T		par:	1.2
Shutoff	Ť	Shutoff		21
electromagnet>Volt: 24	+	electromag	net>Volt:	24
	+			
Inspection—pump test specific	ations +	Overlow qu	antity at	overflow valve:
Test specifications in parent	theses +			
	+	1st speed	1/min:	500
Timing-device characteristic:	+	Charge pre	ss. hPa:	_
	00 .20)	Shutoff		
1st speed 1/min: 450	1	electromag	net>Valt:	24
Charge press hPa: -	1	Overflow		41.7086.10
The travel mas 2 00 7	nn T	augustitus		(26.70101.10)
TD travel mm: 2.003.	700	quaritity/		
THE CITOCHT	1	2nd speed		
KSB/AFB	†	Charge pre	ss. nra:	1000
valve > Volt: 24	+	Shutoff		
electromagnet>Volt: 24	+	electromagi		
2nd speed 1/min: 800	+	Overflow	:	55.60139.00
Charge press hPa: 1000	+	quantity>	cm3/10s:	(40.60154.00)
TD travel mm: 0.601.	40 1	•		
> mm: (0.301	70)	Delivery-a	uant. and	breakaway char.:
Shutoff	1		aa.,,,,,	or carranay ortain
electromagnet>Volt: 24	1			
4th speed 1/min: 900	\mathbf{I}	1nd speed	1/min:	400
	T			
Charge press hPa: 1000	, T	Charge-air		
TD travel mm: 1.201.		point>		
> mm: (0.702	.10) +	LDA-stroke	mm:	7.0
Shutoff	+	Shutoff		
electromagnet>Volt: 24	+	electromagi	net>Volt:	24
5th speed 1/min: 1250	+	Del. quant	ity cm3/:	83.5084.50
Charge press. hPa: 1000	1	> '		(80.0088.00)
TD travel mm: 2.403.	su 🗼	2nd speed		
> mm: (2.103		Charge pres		
Shutoff		Shutoff	, in a	,000
electromagnet>Volt: 24	I	electromage	net Volte	2/.
etectromagnet/vott: 24	T			
s	T	•		0.003.00
Supply-pump pressure characte	ristic:	<u>></u> ,		(0.003.00)
	+	3rd speed		
1st speed 1/min: 500	+	Charge pres	ss. hPa:	1000
Charge press. hPa: 1000	+	Shutoff		
Supply-pump	+	electromagn	net>Volt:	24
pressure> bar: 3.904.	50 +	Del. quant	ity cm3/:	15.045.0
> bar: -	+	> '	1000s.:	
Shutoff	1	4th speed	1/min:	
electromagnet>Volt: 24	1	Charge pres		
2nd speed 1/min: 800	1	Shutoff		,,,,,
	\mathbf{I}	electromagn	ne+>\/o +•	2/.
	T			60.066.0
Supply-pump	10 T		40000	(55.000.0
oressure> bar: 5.406.	10 +	>		(55.071.0)
> bar: -	+	5th speed	1/min:	
Shutoff	+	Charge pres	ss. hPa:	1000
electromagnet>Volt: 24	10	Shutoff		
3rd speed 1/min: 900	+	electromagr		
Charge press. hPa: 1000	+	Del. quanti	ity cm3/:	83.588.5
Supply-pump	1	>		(83.089.0)
pressure> bar: 5.906.	50 1	6th speed	1/min:	
Shutoff	1	Charge pres		
electromagnet>Volt: 24	1	Shutoff		
th speed 1/min: 1250	I	electromagn	net>\/o!+•	24
ttn speed 1/min: 1250 Thanga press hPa: 1000	T			83 n 88 n
restrone trouble figs / //Kal	-4-	1/201 . [11/04/11]		

1000s.: (82.0...89.0) 1/min: 500 7th speed Charge press. hPa: -Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 69.0...70.0 1000s.: (65.5...73.5) 1/min: 850 8th speed Charge press. hPa: 1000 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 82.5...83.5 1000s.: (80.0...86.0) Electr. shutoff: 1st speed 1/min: 350 Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 330 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 7.0...11.0 1000s.: (4.0...14.0) Dispersion cm3/: 5.5 1000s.: (7.0) 1/min: 390 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 130 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 110.0...150.0 1000s.: -1/min: 240 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 68.0...88.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0

Mounting and assembly dimensions:

Designation

K mm: 3.6...3.8 KF mm: 6.2...6.6 MS mm: - mm: 7.0

Ya mm: 34.8...38.8 Yb mm: 45.3...50.1

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

:

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Rated voltage

: 12.0

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet Edition : 12.02.96 replaces Calibrating oil : ISO-4113 : VE6/12F1250R498-5 Injection pump : 0 460 426 246 Type number Customer Part-No.: 3 282 744 Customer-specific information : CDC EURO2 Customer : 6 BTAA 5,9 B DI Engine KW: 120 Power Speed 1/min: 2500 TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 44.00...46.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 109 assembly> Opening bar: 204.00...210.00 Pressure> Perforated-plate mm: 0.5 diameter> Test ini. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840 Start of delivery Prestroke mm: -(from BDC): -Start of delivery block Piston stroke mm: 1.4 mm: +-0.02(0.06)

: D

Test specifications in parentheses

Injection-pump setting values

Timing-device travel 1/min: 1100 Charge press. hPa: 1000 Setting value mm: 1.60...2.00 Shutoff electromagnet>Volt: 24 Supply-pump pressure Speed 1/min: 1100 Charge press hPa: 1000 Setting value bar: 6.50...7.10 Shutoff electromagnet>Volt: 24 Full-load del. with charge press.: 1/min: 850 Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 79.50...80.50 Shutoff electromagnet>Volt: 24 cm3/: 5.0 Dispersion 1000s.: (5.0) Full-load del. w/out charge press.: 1/min: 500 Speed Del. quantity cm3/ 1000s.: 71.00...72.00 > Shutoff electromagnet>Volt: 24 cm3/: 5.0Dispersion 1000s.: (5.0) Low-idle speed regulation Speed 1/min: 325 Del. quantity cm3/ 1000s.: 8.0...12.0 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 5.5 1000s.: (7.0) Full-load speed regulation Speed 1/min: 1380 Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 54.0...66.0 Shutoff electromagnet>Volt: 24 Start: 1/min: 100 Speed

Charge press hPa: -

Outlet >

vet. quantity cms/:		+		
mind> 1000s.:	75.0	+	1st speed 1/min:	500
Shutoff		1	Charge press. hPa:	
electromagnet>Volt:	24	1	Shutoff	
e tecti dilagnet vott.	C4	T		2/
		Ť	electromagnet>Volt:	24
Inspection pump tes		+		41.7086.10
Test specifications	in parentheses	+	quantity> cm3/10s:	(26.70101.10)
•	•	1	2nd speed 1/min:	
Timing-device chara	rteristic.	1	Charge press. hPa:	
rang derive ondre		1	Shutoff	, 000
And amond Almina	/50	T		2/
1st speed 1/min:		+	electromagnet>Volt:	24 55 (8 430 80
Charge press hPa:		+	Overflow :	
TD travel mm:	1.902.90	+	quantity> cm3/10s:	(40.60154.00)
> mm:	(1.703.10)	+		
KSB/AFB		1	Delivery-quant. and	breakaway char
valve > Volt:	2/		beervery quarrer and	Di Cananay Cildi I
		T		
electromagnet>Volt:	24	Ť		400
2nd speed 1/min:		+	1nd speed 1/min:	
	1000	+	Charge-air pressure	-setting
TD travel mm:	1.602.00	+	point> hPa:	
> mm •	(1.102.50)	1		7.0
Shutoff	(1.10)		Shutoff	7.0
	24	T		27
electromagnet>Volt:		+	electromagnet>Volt:	24
4th speed 1/min:		+	Del. quantity cm3/:	77.5078.50
Charge press hPa:	1000	+	> 1000s.:	(74.0082.00)
TD travel mm:	2.002.80	1	2nd speed 1/min:	
	(1.703.10)	1	Charge press. hPa:	
	(1.705.10)	T		1000
Shutoff	0.4	T	Shutoff	24
electromagnet>Volt:	24	+	electromagnet Volt:	24
		+	Del. quantity cm3/:	0.003.00
Supply-pump pressur	e characteristic:	+	> 1000s.:	(0.003.00)
to the feet of the terminal feet of the terminal		1	3rd speed 1/min:	1465
1st speed 1/min:	500	1	Charge press. hPa:	
Observed Minne	4000	T		1000
Charge press. hPa:	1000	+	Shutoff	
Supply-pump		+	electromagnet>Volt:	
pressure> bar:	3.904.50	+	Del. quantity cm3/:	00.040.0
> bar:	_	+	> 1000s.:	
Shutoff		1	4th speed 1/min:	
electromagnet>Volt:	2/.	}	Charge press. hPa:	
etectromagnet/vatt:	200	T		1000
2nd speed 1/min:		+	Shutoff	6.4
Charge press. hPa:	1000	+	electromagnet>Volt:	24
Supply-pump		+	Del. quantity cm3/:	54.066.0
pressure> bar:	5.406.10	+	> 1000s.:	(52.068.0)
> bar:		.1	5th speed 1/min:	
Shutoff		1	Charge press. hPa:	
	2/	T		1000
electromagnet>Volt:		†	Shutoff	2,4
3rd speed 1/min:		+	electromagnet>Volt:	
Charge press. hPa:	1000	+	Del. quantity cm3/:	82.586.5
Supply-pump		+	> 1000s.:	(81.088.0)
	6.507.10	1	6th speed 1/min:	1100
Shutoff		1	Charge press. hPa:	
	24	T		1000
electromagnet>Volt:		T	Shutoff	24
4th speed 1/min:		+	electromagnet>Volt:	24
Charge press. hPa:	1000	+	Del. quantity cm3/:	87.586.5
Supply-pump		+	> 1000s.:	(80.088.0)
	7.07.6	+	7th speed 1/min:	
Shutoff		1	Charge press. hPa:	
	24	T		
electromagnet>Volt:	64	T	Shutoff	2/
_		†	electromagnet>Volt:	C4
Overlow quantity at	overtlow valve:	+	Del. quantity cm3/:	71.072.0

1000s.: (67.5...75.5) > 8th speed 1/min: 850 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 79.5...80.5 1000s.: (77.0...83.0) Mech. shutoff: 1st speed 1/min: 1250 Charge press. hPa: 1000 Del. quantity cm3/: 0.0...3.0 1000s .: -Shutoff electromagnet>volt: 24 Electr. shutoff: 1/min: 350 1st speed Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1/min: 325 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 8.0...12.0 1000s.: (5.0...15.0) cm3/: 5.5 Dispersion 1000s.: (7.0) 2nd speed 1/min: 410 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 130 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 80.0...120.0 1000s.: -2nd speed 1/min: 240 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0...90.0 1000s.: -Shutoff electromagnet: Cut-in

: 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: 6.2...6.6 MS mm: mm: 7.0 LDA stroke mm: 34.8...38.8 Ya mm: 45.3...50.1 Yh Remarks: : Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end position

Yb = Distance between VE flange and speed-control lever in rated speed Measurement point = edge of control lever on distributor-head end

>min voltage

: 10.0

Note inst. in remarks column

Test scheet : CDC

Edition : 12.02.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE6/12F1250R498-6

Type number : 0 460 426 249

Customer Part-No.: 3 282 743

Customer-specific information

Customer : CDC

Engine : 6 BTAA 5,9 B DI

Power KW: 133 Speed 1/min: 2500

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 44.00...46.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.5

Test ini. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

x Length> mm: 840

Start of delivery
Prestroke mm: -

> (from BDC): -

Start of delivery block Piston stroke mm: 1.4

> mm: +-0.02(0.06)

Outlet > : D

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 850 Charge press. hPa: 1000

Setting value mm: 1.30...1.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 850 Charge press hPa: 1000

Setting value bar: 5.50...6.10

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

Speed 1/min: 850 Charge press. hPa: 1000

Del. quantity cm3/

> 1000s.: 86.00...87.00

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 5.0 > 1000s.: (5.0)

Full-load del. w/out charge press.:

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 59.50...60.50

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 5.0 > 1000s.: (5.0)

Low-idle speed regulation

Speed 1/min: 350

Del. quantity cm3/

> 1000s.: 13.0...17.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 5.5 > 1000s.: (7.0)

Full-load speed regulation

Speed 1/min: 1380 Charge press hPa: 1000

Del. quantity cm3/

> 1000s.: 65.50...71.50

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100 Charge press hPa: -

Del. quantity cm3/: 80.0110.0 mind> 1000S.: 80.0 Shutoff	‡	Shutoff electromagnet>Volt:	12
electromagnet>Volt: 12	Ī	Overlow quantity at	overflow valve:
Inspection-pump test specifications Test specifications in parentheses	<u> </u>	1st speed 1/min: Charge press. hPa: Shutoff	
Timing-device characteristic:	I	electromagnet>Volt: Overflow:	12 41 70 86 10
1st speed 1/min: 450 Charge press hPa: -	++++++++++	quantity> cm3/10s: 2nd speed 1/min:	(26.70101.10)
TD travel mm: 1.90.,.2.90 mm: (1.703.10)	‡	Charge press. hPa: Shutoff	
KSB/AFB valve > Volt: 12	‡	<pre>electromagnet>Volt: Overflow :</pre>	
electromagnet>Volt: 12 2nd speed	‡	quantity> cm3/10s:	
Charge press hPa: 1000 TD travel mm: 0.601.40	+	Delivery-quant. and	breakaway char.:
> mm: (0.301.70) Shutoff	‡	1nd speed 1/min:	
electromagnet>Volt: 12 4th speed	‡	Charge-air pressure- point> hPa:	
Charge press hPa: 1000 TD travel mm: 1.301.70	‡	Shutoff electromagnet>Volt:	12
> mm: (0.802.20) Shutoff	‡		(74.5082.50)
electromagnet>Volt: 12 5th speed	+	2nd speed 1/min: Charge press. hPa:	
Charge press. hPa: 1000 TD travel mm: 2.002.80	+	Shutoff electromagnet Volt:	12
> mm: (1.703.10) Shutoff electromagnet>Volt: 12	+++++++++++++++++++++++++++++++++++++	Del. quantity cm3/: > 1000s.: 3rd speed 1/min:	(0.003.00)
Supply-pump pressure characteristic:	Ī	Charge press. hPa: Shutoff	
	Ŧ	electromagnet>Volt: Del. quantity cm3/:	
lst speed	- 1	> 1000s.: 4th speed 1/min:	-
pressure> bar: 3.904.50 Shutoff	Ī	Charge press. hPa: Shutoff	
electromagnet>Volt: 12 2nd speed	Ì	electromagnet>Volt: Del. quantity cm3/:	
Charge press. hPa: 1000 Supply—pump	+		(62.574.5)
pressure> bar: 5.105.70	┿┿┿┿╈╇╈╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇╇ ╇	Charge press. hPa: Shutoff	
electromagnet>Volt: 12 3rd speed	1	<pre>electromagnet>Volt: Del. quantity cm3/:</pre>	
Charge press. hPa: 1000 Supply-pump	+		(82.089.0)
ressure> bar: 5.506.10	+	Charge press. hPa: Shutoff	
lectromagnet>Volt: 12 th speed 1/min: 1250	1	<pre>electromagnet>Volt: Del. quantity cm3/:</pre>	
tharge press. hPa: 1000	Ţ		(84.591.5)
ressure> bar: 6.97.5	+	Charge press. hPa:	

Shutoff electromagnet>Volt: 12 Electr. shutoff: 1/min: 350 1st speed Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1/min: 350 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 13.0...17.00 1000s.: (10.0...20.0) cm3/: 5.5 Dispersion 1000s.: (7.0) 1/min: 410 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 130 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 80.0...120.0 1000s.: -2nd speed 1/min: 230 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 55.0...85.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: 6.2...6.6 mm: -MS mm: -LDA stroke mm: 34.8...38.8 Ya mm: 42.7...48.3 Yb

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Remarks:

Note inst. in remarks column

Test scheet : MWM

Edition : 06.03.96

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE6/12F140OR665 Type number : 0 460 426 250

Customer Part-No. :

Customer-specific information

Customer : MWM

Engine : 6.10 NA

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > *C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 109

Opening

Pressure> bar: 204.00...210.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 840

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1200

Setting value mm: 2.70...2.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1200

Setting value bar: 8.00...8.60

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 750

Del. quantity cm3/

> 1000s.: 66.0...67.0

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 4.0 > 1000s.: (4.5)

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

> 1000s.: 14.0...18.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 3.5 > 1000s.: (5.0)

Full-load speed regulation

Speed 1/min: 1550

Del. quantity cm3/

> 1000s.: 47.50...54.50

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 90.00...130.00

mind> 1000s.: 90.0

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 1000

TD travel mm: 0.60...1.20 mm: (0.30...1.50)

electromagnet>Volt: 12

2nd speed 1/min: 1200

TD travel mm: 2.70...2.90 mm: (2.30...3.30)

Shutoff

electromagnet>Volt: 12 3rd speed 1/min: 1400

TD travel mm: 3.90...4.50 mm: (3.60...4.80)

Shutoff

electromagnet>Volt: 12

Supply-pump pressur	e characteristic:	+	Shutoff	• -
		+	electromagnet>Volt:	
1st speed 1/min:	500	†	Del. quantity cm3/:	
Supply-pump		+		(70.080.0)
	4.605.20	+	6th speed 1/min:	750
Shutoff		+	Shutoff	
electromagnet>Volt:		+	electromagnet>Volt:	
2nd speed 1/min:	1000	+	Del. quantity cm3/:	66.067.0
Supply-pump		+	> 1000s.:	(63.569.5)
pressure> bar:	7.007.60	+	7th speed 1/min:	500
Shutoff		+	Shutoff	
electromagnet>Volt:	12	+	electromagnet>Volt:	12
3rd speed 1/min:		+	Del. quantity cm3/:	
Supply-pump		+		(56.066.0)
	8.008.60	1		
Shutoff		+		
electromagnet>Volt:	12	1		
4th speed 1/min:		1	Electr. shutoff:	
Supply-pump	1 400	1	Eccott onatory.	
	8.609.20	1	1st speed 1/min:	ፈበበ
Shutoff	0.00,.20	1	Del. quantity cm3/:	
electromagnet>Volt:	10	\mathbf{I}		(0.003.00)
etectionagnetyvott.		I	Shutoff	(0.005.00)
Overlow quantity at	avanflau valvas	T	electromagnet>volt:	
overtow quantity at	over tow valve.	T	etectromagnet/vott.	
1st speed 1/min:	500	T	Idle delivery:	
Shutoff	500	T	idle delivery.	
	40	T	1st speed 1/min:	/.OO
electromagnet>Volt:	16 55 50 400 5	T		400
	55.50100.5	†	Shutoff	13
quantity> cm3/10s:	(40.50775.5)	十	electromagnet>Volt:	12
2nd speed 1/min:	1400	†	Del. quantity cm3/:	
Shutoff	40	+		(12.020.00)
electromagnet>Volt:		†	Dispersion cm3/:	
	52.70136.10	†	> 1000s.:	
quantity> cm3/10s:	(37.70151.10)	†	2nd speed 1/min:	350
		+	Shutoff	
Delivery-quant. and	breakaway char.:	+	electromagnet>Volt:	12
		+	Del. quantity cm3/:	31.039.0
		+		(29.041.0)
1nd speed 1/min:	1740	+	3rd speed 1/min:	450
Shutoff		+	Shutoff	
<pre>electromagnet>Volt:</pre>	12	+	electromagnet>Volt:	12
Del. quantity cm3/:	0.03.0	+	Del. quantity cm3/:	0.003.00
> 1000s.:		+	> 1000s.:	(0.003.00)
2nd speed 1/min:	1650	+		
Shutoff		+	Automatic starting f	uel delivery:
electromagnet Volt:	12	+		•
Del. quantity cm3/:		+	1st speed 1/min:	260
> 1000s.:	(18.038.0)	+	Shutoff	
3rd speed 1/min:		1	electromagnet>Volt:	12
Shutoff		1	Del. quantity cm3/:	
electromagnet>Volt:	12	1	> 1000s.:	-
Del. quantity cm3/:		1		
	(45.557.5)	1	Shutoff electromagne	t:
4th speed 1/min:		1	and the controlling to	
Shutoff	, , , , ,	1	Cut-in	
electromagnet>Volt:	12	1		10.0
Del. quantity cm3/:	65 5 69 5	1		12.0
> 1000s.:	(64.070.5)	1	Hatta folloge .	,
		Ι	Mounting and assembly	v dimensions:
5th speed 1/min:	1000	Γ	TOUTETHY and dosembly	, amensions.

Designation

K mm: 3.6...3.8 mm: 1.1...1.4 ya mm: 41.0...43.0 yb mm: 37.8...46.2

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

1/min: 1000 BOSCH-INJ.-PUMP TEST SPECIFICATIONS Speed Charge press. hPa: 1000 Setting value mm: 1.60...2.00 Note inst. in remarks column Shutoff Test scheet : CDC electromagnet>Volt: 12 : 08.02.96 Edition replaces Supply-pump pressure Calibrating oil : ISO-4113 1/min: 1000 Speed Injection pump : VE6/12F125OR498-7
Type number : 0 460 426 251 Charge press hPa: 1000 Setting value bar: 6.00...6.60 Customer Part-No. : Shutoff electromagnet>Volt: 12 Customer-specific information Full-load del. with charge press.: Customer : CUMMINS 1/min: 850 Speed Charge press. hPa: 1000 Engine : 6 BT Del. quantity cm3/ TEST BENCH REQUIREMENTS 1000s.: 80.00...81.00 Shutoff Overflow restricti: 1 463 456 303 electr@magnet>Volt: 12 Dispersion cm3/: 5.0 Calibrating-oil 1000s.: (5.0) return>temp. > °C with>thermometer> : 40.00...48.00 Full-load del. w/out charge press.: Electronically> : 42.00...50.00 1/min: 500 Inlet press., bar : 0.30...0.40 Del. quantity cm3/ 1000s.: 58.50...59.50 Shutoff Calibrating nozzle-holder assembly> : 1 688 901 109 electromagnet>Volt: 12 Dispersion cm3/: 5.0 1000s.: (6.0) Opening Pressure> bar: 204.00...210.00 Low-idle speed regulation Perforated-plate diameter> mm: 0.5 Speed 1/min: 320 Del. quantity cm3/ 1000s.: 11.5...15.5 Test inj. tubing : 1 680 750 017 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 5.5 Outside diameter : 6.00 x Wall>thickness : 2.00 1000s.: (7.0) x Length> mm: 840 Full-load speed regulation Start of delivery 1/min: 1380 Prestroke mm: -Speed Charge press hPa: 1000 > (from BDC): -Del. quantity cm3/ 1000s.: 51.00...57.00 Start of delivery block Shutoff Piston stroke mm: 1.4 mm: +-0.02(0.04)electromagnet>Volt: 12 : D Outlet > Start: Injection-pump setting values Speed 1/min: 100 Del. quantity cm3/: 115.00...145.00 Test specifications in parentheses

mind>

1000s.: 130.0

Timing-device travel

Shutoff Overlow quantity at overflow valve: electromagnet>Volt: 12 Inspection-pump test specifications 1st speed 1/min: 500 Test specifications in parentheses Charge press. hPa: -Shutoff Timing-device characteristic: electromagnet>Volt: 12 Overflow : 55.50...100.5 quantity> cm3/10s: (40.50...115.5) 1/min: 450 1st speed 2nd speed 1/min: 1250 Charge press hPa: -TD travel mm: 1.90...2.90 Charge press. hPa: 1000 > mm: (1.78...3.10) Shutoff KSB/AFB electromagnet>Volt: 12 : 52.70...136.10 valve > Volt: 12 Overflow electromagnet>Volt: 12 quantity> cm3/10s: (37.70...151.10) 1/min: 850 2nd speed Charge press hPa: 1000 Delivery-quant. and breakaway char.: mm: 0.50...1.30 TD travel mm: (0.20...1.60) 1/min: 600 Shutoff 1nd speed electromagnet>Volt: 12 Charge-air pressure-setting 1/min: 1000 hPa: 1000 point> hPa: 500 3rd speed Charge press LDA-stroke mm: mm: 1,60...2.00 Shutoff TD travel mm: (1.10...2.50) electromagnet>Volt: 12 Del. quantity cm3/: 79.50...81.50 Shutoff 1000s.: (76.00...84.00) electromagnet>Volt: 12 1/min: 1250 1/min: 1500 2nd speed 4th speed Charge press hPa: 1000 Charge press. hPa: 1000 mm: 2.00...2.80 Shutoff TD travel mm: (1.70...3.10) electromagnet Volt: 12 Del. quantity cm3/: 0.00...3.00 Shutoff 1000s.: (0.00...3.00) electromagnet>Volt: 12 1/min: 1450 3rd speed Charge press. hPa: 1000 Supply-pump pressure characteristic: Shutoff electromagnet>Volt: 12 1st speed 1/min: 500 Del. quantity cm3/: 12.0...32.0 Charge press. hPa: 1000 1000s.: -Supply-pump bar: 4.10...4.70 1/min: 1380 4th speed pressure> Charge press. hPa: 1000 Del. quantity cm3/: 51.0...57.0 > 1000s.: (48.0...60.0) Shutoff electromagnet>Volt: 12 2nd speed 1/min: 850 1/min: 1250 Charge press. hPa: 1000 5th speed Charge press. hPa: 1000 Supply-pump bar: 5.50...6.10 Shutoff pressure> electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 81.50...84.50 electromagnet>Volt: 12 3rd speed 1/min: 1000 Charge press. hPa: 1000 1000s.: (80.00...86.00) 1/min: 1200 6th speed Charge press. hPa: 1000 Supply-pump bar: 6.00...6.60 Shutoff pressure> electromagnet>Volt: 12 Shutoff Del. quantity cm3/: 82.0...85.0 electromagnet>Volt: 12 1000s.: (80.0...87.0) 4th speed 1/min: 1250 Charge press. hPa: 1000 7th speed 1/min: 850 Charge press. hPa: 1000 Supply-pump bar: 7.00...7.60 pressure> Shutoff Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 80.0...81.0 electromagnet>Volt: 12

1000s.: (77.5...83.5) 1/min: 500 4th speed 1/min: 100 8th speed Charge press. hPa: 1000 Shutoff Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 115.00...145.00 electromagnet>Volt: 12 Del. quantity cm3/: 90.50...100.5 1000s.: -1000s.: -Shutoff electromagnet: Mech. shutoff: Cut-in >min voltage : 10.0 1st speed 1/min: 1250 Rated voltage : 12.0 Charge press. hPa: 1000 Del. quantity cm3/: 0.00...3.00 Mounting and assembly dimensions: 1000s.: (0.00...3.00) > Shutoff Designation mm: 3.6...3.8 electromagnet>volt: 12 KF mm: -Electr. shutoff: MS mm: -LDA stroke mm: mm: 34.5...38.5 1st speed 1/min: 320 Ya Charge press. hPa: -Yb mm: 45.2...50.8 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Remarks: Shutoff electromagnet>volt: -Ya = Distance between VE flange and Idle delivery: speed-control lever in idle position 1st speed 1/min: 320 Measurement point = edge of control Shutoff lever on drive end electromagnet>Volt: 12 Del. quantity cm3/: 11.5...15.50 1000s.: (8.50...18.50) Yb = Distance between VE flange and cm3/: 5.5 speed-control lever in rated speed Dispersion 1000s.: (7.0) position 1/min: 250 Measurement point = edge of control 2nd speed lever on distributor-head end Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 21.0...29.0 1000s.: (19.0...31.0) > 1/min: 400 3rd speed Shutoff Permissible port/port scatter with electromagnet>Volt: 12 stop test, electrical = max. 5.0 Del. quantity cm3/: 0.00...3.00 ccm/1000 S.1000s.: (0.00...3.00) Permissible port/port scatter with stop test, mechanical = \max . 5.0 Automatic starting fuel delivery: ccm/1000 S. 1/min: 130 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 130.00...170.00 1000s.: -2nd speed 1/min: 240 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 50.00...80.00

1000s.: -

AFB/AFB BOSCH-INJ.-PUMP TEST SPECIFICATIONS Volt: 24 valve > Shutoff Note inst. in remarks column electromagnet>Volt: 24 Supply-pump pressure Test scheet : FIA : 27.02.96 Edition 1/min: 1000 replaces Speed hPa: 1000 Calibrating oil : ISO-4113 Charge press Setting value bar: 6.5...7.1 KSB/AFB Injection pump : VE6/12F1350R623-1 Type number : 0 460 426 252 valve > Volt: 24 Customer Part-No. : Shutoff electromagnet>Volt: 24 Full-load del. with charge press.: Customer-specific information Customer : IVECO-FIAT 1/min: 700 Speed : 8060.45.5200 EURO2 Charge press. hPa: 1000 Engine Del. quantity cm3/ 1000s.: 82.50...83.50 KW: 152 Power KSB/AFB TEST BENCH REQUIREMENTS valve > Volt: 24 Shutoff Overflow restricti: 1 463 456 303 electromagnet>Volt: 24 Dispersion cm3/: 3.5 1000s.: (5.0) Calibrating-oil return>temp. > °C with>thermometer> : 54.00...56.00 Full-load del. w/out charge press.: 1/min: 500 Inlet press., bar : 0.30...0.40 Speed Del. quantity cm3/ > 10005.: 52.50...53.50 Calibrating nozzle-holder 11 : 1 688 901 027 KSB/AFB assembly> valve > Volt: 24 Shutoff Openina bar: 247.00...253.00 Pressure> electromagnet>Volt: 24 Low-idle speed regulation Perforated-plate diameter> mm: 0.5 Speed 1/min: 340 Del. quantity cm3/ 1000s.: 13.0...17.0 Test inj. tubing : 1 680 750 073 > KSB/AFB > Volt: 24 Outside diameter : 6.00 valve x Wall>thickness : 2.00 Shutoff electromagnet>Volt: 24 x Length> mm: 450 Del. quantity cm3/: 4.0 1000s.: (5.0) Start of delivery Prestroke mm: -(from BDC): -Full-load speed regulation 1/min: 1450 Injection-pump setting values Speed hPa: 1000 Test specifications in parentheses Charge press Del. quantity cm3/ 1000s.: 55.00...59.00 Timing-device travel KSB/AFB 1/min: 1050 > Volt: 24 valve Speed Charge press. hPa: 1000 Shutoff

electromagnet>Volt: 24

Setting value

mm: 2.10...2.30

		+	Supply-pump	
Start:		+	pressure> bar:	4.104.70
Speed 1/min:	100	Ī	KSB/AFB valve > Volt:	2/.
Del. quantity cm3/:		I	Shutoff	24
mind> 1000s.	60.00	Ι	electromagnet>Volt:	24
KSB/AFB	00.0	1	3rd speed 1/min:	
Valve > Volt:	24	1		1000
Shutoff	C T	1	Supply-pump	1000
electromagnet>Volt:	24	1	pressure> bar:	6.507.10
oteout omagness rotes.		1	KSB/AFB	0.50.1.7.1.0
Inspection-pump tes	st specifications	1	valve > Volt:	24
Test specifications		1	Shutoff	
		+	electromagnet>Volt:	24
Timing-device chara	cteristic:	+	4th speed 1/min:	
		+		1000
1st speed 1/min:	950	+	Supply-pump	
	1000	+		8.409.00
TD travel mm:	0.901.50	+	KSB/AFB	
	(0.501.90)	+	valve > Volt:	24
KSB/AFB		+	Shutoff	
valve > Volt:	24	+	electromagnet>Volt:	24
electromagnet>Volt:	24	+	•	
2nd speed 1/min:		+	Overlow quantity at	overflow valve:
	1000	+		
TD travel mm:	2.102.30	+	1st speed 1/min:	500
	(1.502.90)	Ŧ	Charge press. hPa:	
KSB/AFB		+	KSB/AFB	
valve > Volt:	24	+	valve > Volt:	24
Shutoff		+	Shutoff	
electromagnet>Volt:	24	+	electromagnet>Volt:	24
3rd speed 1/min:		+	Overflow :	55.50100.5
	1000	+	quantity> cm3/10s:	(40.50115.5)
TD travel mm:	1.82.2 A	+	2nd speed 1/min:	1350
> mm:		+	Charge press. hPa:	
KSB/AFB		+	KSB/AFB	
valve > Volt:	mon .	+	valve > Volt:	24
Shutoff		+	Shutoff	
electromagnet>Volt:	24	+	electromagnet>Volt:	24
4th speed 1/min:		+	Overflow :	52.70136.10
	1000	+	quantity> cm3/10s:	(37.70151.10)
	2.23.4 B	+	•	
> mm:	_	+	Delivery-quant. and	breakaway char .:
KSB/AFB		+		
valve > Volt:	4460	+		
Shutoff		+	1nd speed 1/min:	
electromagnet>Volt:	24	+	Charge-air pressure-	
		+	point> hPa:	400
Supply-pump pressur	e characteristic:	+	LDA-stroke mm:	-
		+	KSB/AFB	
1st speed 1/min:		+	valve > Volt:	24
Charge press. hPa:	1000	+	Shutoff	
Supply-pump		+	electromagnet>Volt:	24
pressure> bar:	7.007.60	+	Del. quantity cm3/:	73.074.0
KSB/AFB		+		(79.586.5)
<pre>valve > Volt:</pre>	-	+	2nd speed 1/min:	
Shutoff		+	Charge press. hPa:	1000
electromagnet>Volt:		+	KSB/AFB	
2nd speed 1/min:	600	+	valve > Volt:	24
Charge press. hPa:	1000	+	Shutoff	

electromagnet Volt:		+	Electr. shutoff:	
Del. quantity cm3/: > 1000s.:		†	1-+ 1 1/	750
	(0.003.00)	†	1st speed 1/min:	
3rd speed 1/min:		†	Charge press. hPa:	
Charge press. hPa:	1000	†	Del. quantity cm3/: > 1000s.:	0.003.00
KSB/AFB valve > Volt:	2/	Ť		(0.003.00)
	24	T	Shutoff	
Shutoff	24	Ť	electromagnet>volt:	-
electromagnet>Volt:		T	Talla dalayanya	
Del. quantity cm3/:		†	Idle delivery:	
	(21.033.0)	Ť	1-+ 1/	7/0
4th speed 1/min:		Ť	1st speed 1/min:	340
Charge press. hPa:	1000	Ť	>KSB/AFB valve > Volt:	2/
KSB/AFB	2/	T		24
valve > Volt:		T	Shutoff	2/
Del. quantity cm3/:		†	electromagnet>Volt:	
	(51.063.0)	†	Del. quantity cm3/:	
5th speed 1/min:		†		(10.020.0)
Charge press. hPa:	7000	†	Dispersion cm3/:	
KSB/AFB	0.4	†	> 1000s.:	
valve > Volt:	24	†	2nd speed 1/min:	370
Shutoff		+	KSB/AFB	0.1
electromagnet>Volt:		+	valve > Volt:	24
Del. quantity cm3/:		+	Shutoff	
	(84.591.5)	+	electromagnet>Volt:	
6th speed 1/min:		+	Del. quantity cm3/:	
Charge press. hPa:	1000	+	> 1000s.:	
KSB/AFB		+	3rd speed 1/min:	425
valve > Volt:	24	+	KSB/AFB	
Shutoff		+	valve > Volt:	24
electromagnet>Volt:		+	Shutoff	
Del. quantity cm3/:		+	electromagnet>Volt:	
	(77.084.0)	+	Del. quantity cm3/:	
7th speed 1/min:		+	> 1000s.:	(0.003.00)
Charge press. hPa:	1000	+		
KSB/AFB		+	Automatic starting 1	fuel delivery:
valve > Volt:	24	+		
Shutoff		+	1st speed 1/min:	200
electromagnet>Volt:	24	+	KSB/AFB	
Del. quantity cm3/:	82.583.5	+	valve > Volt:	24
> 1000s.:	(79.586.5)	+	Shutoff	
Sth speed 1/min:		+	electromagnet>Volt:	24
Charge press. hPa:	1000	+	Del. quantity cm3/:	75.0125.0
KSB/AFB		+	> 1000s.:	-
valve > Volt:	24	+		
Shutoff		+	2nd speed 1/min:	350
electromagnet>Volt:	24	1	KSB/AFB	
Del. quantity cm3/:			valve > Volt:	24
	(83.090.0)	•	Shutoff	
9th speed 1/min:			electromagnet>Volt:	
Charge press. hPa:	_	+	Del. quantity cm3/:	
KSB/AFB		+	> 1000s.:	-
valve > Volt:	24	+		
Shutoff			4th speed 1/min:	100
electromagnet>Volt:	24		KSB/AFB	
Del. quantity cm3/:	52.553.5	1	valve > Volt:	24
	(49.556.5)		Shutoff	
			electromagnet>Volt:	
		+	Del. quantity cm3/:	
-		+	> 1000s.:	

Shutoff electromagnet:

Cut-in

>min voltage : 20.0 Rated voltage : 24.0

Mounting and assembly dimensions:

Designation

K mm: 3.5...3.7

KF mm: -MS mm: -

MS1 mm: 1.3...1.6

LDA stroke mm: -

Ya mm: 37.9...39.9 Yb mm: 41.4...46.6

Remarks:

:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Permissible port/port scatter with stop test, mechanical = max. 5.0 ccm/1000 S.

Timing-device travel BOSCH-INJ.-PUMP TEST SPECIFICATIONS Speed 1/min: 1100 Charge press. hPa: 1000 Setting value mm: 1.60...2.00 Note inst. in remarks column Test scheet Shutoff : CDC Edition : 12.02.96 electromagnet>Volt: 24 replaces Calibrating oil : ISO-4113 Supply-pump pressure Injection pump : VE6/12F125OR671 Type number : 0 460 426 254 Speed 1/min: 1100 Charge press hPa: 1000 Setting value bar: 6.70...7.30 Customer Part-No.: 3 282 755 Shutoff Customer-specific information electromagnet>Volt: 24 : CDC EURO2 Customer Full-load del. with charge press.: : 6 BTAA 5,9 B DI Engine 1/min: 850 Speed Charge press. hPa: 1000 KW: 96 Power Speed 1/min: 2500 Del. quantity cm3/ 1000s.: 81.00...82.00 TEST BENCH REQUIREMENTS Shutoff electromagnet>Volt: 24 Overflow restricti: 1 463 456 303 Dispersion cm3/: 5.0 1000s.: (5.0) Calibrating-oil return>temp. > °C Full-load del. w/out charge press.: with>thermometer> : 44.00...46.00 Speed 1/min: 500 Inlet press., bar : 0.30...0.40 Del. quantity cm3/ 1000s.: 65.0...66.0 Shutoff Calibrating nozzle-holder assembly> : 1 688 901 109 electromagnet>Volt: 24 Dispersion cm3/: 5.0 1000s.: (5.0) Opening bar: 204.00...210.00 Pressure> Low-idle speed regulation Perforated-plate diameter> mm: 0.5 Speed 1/min: 300 Del. quantity cm3/ 1000s.: 7.5...11.5 Shutoff Test inj. tubing : 1 680 750 017 electromagnet>Volt: 24 Del. quantity cm3/: 5.5 Outside diameter : 6.00 1000s.: (7.0) x Wall>thickness : 2.00 x Length> mm: 840 Full-load speed regulation Start of delivery Speed 1/min: 1400 Prestroke mm: -Charge press hPa: 1000 Del. quantity cm3/ > (from BDC): -1000s.: 33.5...39.5 Start of delivery block Piston stroke mm: 1.4 > mm: +-0.02(0.06) Shutoff пип. : D electromagnet>Volt: 24 Outlet > Start: Injection pump setting values Test specifications in parentheses Speed 1/min: 100 Charge press hPa: -

Del. quantity cm3/:		+		500
mind> 1000s.: Shutoff	70.0	†	1st speed 1/min:	
electromagnet>Volt:	24	İ	Charge press. hPa: Shutoff	-
occor anagnes voca.		1	electromagnet>Volt:	24
Inspection-pump tes	t specifications	+	Overflow :	37.5082.00
Test specifications	in parentheses	+	quantity> cm3/10s:	
Timing do do object	-+	†	2nd speed 1/min:	1250
Timing-device chara	cteristic:	İ	Charge press. hPa: Shutoff	1000
1st speed 1/min:	450	+	electromagnet>Volt:	24
Charge press hPa:	cine	+	Overflow :	44.40100.00
	1.802.80	+	quantity> cm3/10s:	(29.40115.00)
> mm: KSB/AFB	(1.603.00)	†	Delivery-quant. and	brookayay shan .
valve > Volt:	24	I	verivery quant. and	Dieakaway Char
electromagnet>Volt:		1		
2nd speed 1/min:	1000	+	1nd speed 1/min:	
	1000	+	Charge-air pressure	
	1.501.70	†	point> hPa:	
> mm: Shutoff	-	İ	LDA-stroke mm: Shutoff	5.3
electromagnet>Volt:	24	Ţ	electromagnet>Volt:	24
3rd speed 1/min:	1100	+	Del. quantity cm3/:	
Charge press hPa:		+		(70.0078.00)
	1.62.0	+	2nd speed 1/min:	
> mm: Shutoff	(1.12.5)	†	Charge press. hPa: Shutoff	1000
electromagnet>Volt:	24	I	electromagnet Volt:	24
4th speed 1/min:	1250	+	Del. quantity cm3/:	0.003.00
Charge press hPa:	1000	+	> 1000s.:	(0.003.00)
	1.902.70	+	3rd speed 1/min:	
> mm: Shutoff	(1.603.00)	†	Charge press. hPa: Shutoff	1000
electromagnet>Volt:	24	+++++++++++	electromagnet>Volt:	24
a cooti omagilos, total	to F	+	Del. quantity cm3/:	
Supply-pump pressure	characteristic:	+	> 1000s.:	-
	500	+	4th speed 1/min:	
1st speed 1/min:		†	Charge press. hPa:	7000
Charge press. hPa: Supply-pump	1000	Ī	Shutoff electromagnet>Volt:	24
	4.204.80	I	Del. quantity cm3/:	
> bar:		+	> 1000s.:	(30.542.5)
Shutoff		+	5th speed 1/min:	
electromagnet>Volt:		†	Charge press. hPa:	1000
2nd speed 1/min: Charge press. hPa:		İ	Shutoff electromagnet>Volt:	24
Supply-pump	7000	I	Del. quantity cm3/:	
	6.707.30	+		(81.087.0)
> bar:	•••	+	6th speed 1/min:	
Shutoff	24	+	Charge press. hPa:	-
electromagnet>Volt: 3rd speed		İ	Shutoff electromagnet>Volt:	24
Charge press. hPa:		I	Del. quantity cm3/:	65.066.0
Supply-pump		+		(61.569.5)
pressure> bar:	7.408.00	+	7th speed 1/min:	
Shutoff	2/	+	Charge press. hPa:	1000
electromagnet>Volt:	24	İ	Shutoff electromagnet>Volt:	2/4
Overlow quantity at	overflow valve:	I	Del. quantity cm3/:	
THE LOW HOUSELFEE OF	TICLICAN VALVO	1	cost demineral outs, e	

1000s.: (78.5...84.5) > Mech. shutoff: 1/min: 1250 1st speed Charge press. hPa: 1000 Del. quantity cm3/: 0.0...3.0 1000s.: -Shutoff electromagnet>volt: 24 Electr. shutoff: 1st speed 1/min: 300 Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1/min: 300 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 7.5...11.5 1000s.: (4.5...14.5) cm3/: 5.5 Dispersion 1000s.: (7.0) > 1/min: 370 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1st speed 1/min: 130 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 80.0...120.0 1000s.: -1/min: 210 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 60.0...90.0 1000s.: -Shutoff electromagnet: Cut-in >min voltage : 10.0 : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.6...3.8

M10

KF mm: 6.2...6.6 mm: 1.0..1.25 mm: 5.3 mm: 34.8...38.8 yb mm: 43.0...48.6 Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : CDC Edition : 26.02.96 replaces Calibrating oil : ISO-4113 Injection pump : VE6/12F1250R498-8 Type number : 0 460 426 256 Customer Part-No. : Customer-specific information Customer : CDC Engine : 6 BTAA 5,9 B DI KW: 118 Power 1/min: 2500 Speed TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer>: 44.00...46.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder assembly> : 1 688 901 109 Opening bar: 204.00...210.00 Pressure> Perforated-plate diameter> mm: 0.5 Test inj. tubing : 1 680 750 017 Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length> Start of delivery Prestroke mm: -(from BDC): -

Start of delivery block mm: 1.4 Piston stroke mm: +-0.02(0.06)Outlet > : D Injection-pump setting values Test specifications in parentheses

Timing-device travel 1/min: 1100 Speed Charge press. hPa: 1000 Setting value mm: 1.50...1.90 Shutoff electromagnet>Volt: 12 Supply-pump pressure 1/min: 1100 Speed Charge press hPa: 1000 Setting value bar: 6.30...6.90 Shutoff electromagnet>Volt: 12 Full-load del. with charge press.: 1/min: 850 Charge press. hPa: 1000 Del. quantity cm3/ 1000s.: 84.00...85.00 Shutoff electromagnet>Volt: 12 cm3/: 5.0 Dispersion 1000s.: (5.0) Full-load del. w/out charge press.: 1/min: 500 Del. quantity cm3/ 1000s.: 70.5...71.5 Shutoff electromagnet>Volt: 12 cm3/: 5.0 Dispersion 1000s.: (5.0) Low-idle speed regulation 1/min: 350 Speed Del. quantity cm3/ 1000s.: 6.0...10.0 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 5.5 1000s.: (7.0) Full-load speed regulation 1/min: 1380 Speed Charge press hPa: 1000 Del. quantity cm3/ 1000s.: 57.5...63.5 Shutoff electromagnet>Volt: 12

1/min: 100

Start:

Speed

Charge press hPa:	- 20 0 400 0	+	pressure> bar: Shutoff	7.37.9
Del. quantity cm3/: mind> 1000s.:	70.0100.0	T	electromagnet>Volt:	12
Shutoff	70.0	I	etectromagnet/vott:	12
electromagnet>Volt:	12	1	Overlow quantity at	overflow valve
cccci ollagiletz voct.	12	1	over tow quarterty at	. OVER TOW VULVE.
Inspection-pump tes	t specifications	1	1st speed 1/min:	500
Test specifications		+	Charge press. hPa:	
		+	Shutoff	
Timing-device chara	cteristic:	+	electromagnet>Volt:	12
•		+	Overflow :	37.5082.00
1st speed 1/min:	450	+	quantity> cm3/10s:	(22.5097.00)
Charge press hPa:		+	2nd speed 1/min:	1250
TD travel mm:	1.902.90	+	Charge press. hPa:	1000
> mm:	(1.703.10)	+	Shutoff	
KSB/AFB		+	electromagnet>Volt:	12
valve > Volt:		+	Overflow :	
electromagnet>Volt:	12	+	quantity> cm3/10s:	(29.40115.00
2nd speed 1/min:		+		
Charge press hPa:	1000	+	Delivery-quant. and	l breakaway char.
TD travel mm:	0.301.10	+		
> mm:	(0.001.40)	+		4-5
Shutoff		+	1nd speed 1/min:	
electromagnet>Volt:	12	+	Charge-air pressure	
3rd speed 1/min:	1000	+	•	450
Charge press hPa:	1000	+	LDA-stroke mm:	-
TD travel mm:	1.51.9	+	Shutoff	40
	(1.02.4)	+	electromagnet>Volt:	
Shutoff	40	†	Del. quantity cm3/:	79.0080.00
electromagnet>Volt:	12	†		(75.5083.50)
4th speed 1/min:		†	2nd speed 1/min:	
Charge press hPa:	7000	†	Charge press. hPa:	1000
TD travel mm:	(4.702.00	+	Shutoff	42
	(1.703.10)	T	electromagnet Volt:	
Shutoff	10	Ī	Del. quantity cm3/: > 1000s.:	(0.003.00)
electromagnet>Volt:	12	Τ	3rd speed 1/min:	
Supply-pump pressure	o characteristic:	Ι	Charge press. hPa:	
authra-hamb blessay	e character istre.	Ι	Shutoff	1000
1st speed 1/min:	500	I	electromagnet>Volt:	12
	1000	1	Del. quantity cm3/:	
Supply-pump	1000	1	> 1000s.:	
	4.104.70	1	4th speed 1/min:	
Shutoff		1	Charge press. hPa:	
electromagnet>Volt:	12	1	Shutoff	
2nd speed 1/min:		+	electromagnet>Volt:	12
	1000	+	Del. quantity cm3/:	57.563.5
Supply-pump		+		(54.566.5)
	5.906.50	+	5th speed 1/min:	1250
Shutoff		+	Charge press. hPa:	1000
electromagnet>Volt:	12	+	Shutoff	
3rd speed 1/min:		+	electromagnet>Volt:	12
Charge press. hPa:	1000	+	Del. quantity cm3/:	82.585.5
Supply-pump		+		(81.087.0)
pressure> bar:	6.306.90	+	6th speed 1/min:	
Shutoff		+	Charge press. hPa:	
electromagnet>Volt:		+	Shutoff	4.0
4th speed 1/min:		+	electromagnet>Volt:	12
Charge press. hPa:	1000	†	Del. quantity cm3/:	70.571.5
Supply-pump		+	> 1000s.:	(67.075.0)

7th speed 1/min: 850 Charge press. hPa: 1000 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 84.0...85.0 1000s.: (81.5...87.5) Mech. shutoff: 1st speed 1/min: 1250 Charge press. hPa: 1000 Del. quantity cm3/: 0.0...3.0 1000s.: -> Shutoff electromagnet>volt: 12 Electr. shutoff: 1st speed 1/min: 350 Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) > Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 350 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 6.0...10.0 1000s.: (3.0...13.0) cm3/: 5.5 Dispersion 1000s.: (7.0) 2nd speed 1/min: 410 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 130 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 75.0...115.0 1000s.: -1/min: 240 2nd speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 65.0...95.0 1000s.: -Shutoff electromagnet: Cut-in : 10.0 >min voltage

Mounting and assembly dimensions:

Designation

K mm: 3.6...3.8 KF mm: 6.2...6.6 MS1 mm: 1.2..1.35 Ya mm: 34.8...38.8 Yb mm: 43.8...49.4

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

.

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Rated voltage : 12.0

Note inst. in remarks column

Test scheet : CDC Edition : 26.02.96

replaces

Calibrating oil : ISO-4113

Injection pump : VE6/12F1250R373-8 Type number : 0 460 426 257

Customer Part-No.: 3 930 172

Customer-specific information

Customer : CDC

: 6 BTA 590 DI Engine

Power KW: 130 1/min: 2500 Speed

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 44.00...46.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 027 assembly>

Opening |

bar: 247.00...253.00 Pressure>

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 840 x Length>

Start of delivery

mm: 0.3 Prestroke

> (from BDC): +-0.02(0.04)

Start of delivery block Piston stroke mm: 1.85

mm: +0.02(0.06)>

Outlet > : D

Injection-pump setting values Test specifications in parentheses Timing-device travel

1/min: 750 Speed Charge press. hPa: 1000

Setting value mm: 1.30...1.70

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

1/min: 750 Charge press hPa: 1000

Setting value bar: 3.20...3.80

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

1/min: 750 Speed Charge press. hPa: 1000

Del. quantity cm3/

1000s.: 84.50...85.50

Shutoff

electromagnet>Volt: 24 Dispersion cm3/: 4.0 1000s.: (4.5) >

Full-load del. w/out charge press.:

1/min: 500 Speed

Del. quantity cm3/

1000s.: 68.5...69.5

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

1/min: 375 Speed

Del. quantity cm3/

1000s.: 8.0...14.0 >

Shutoff

electromagnet>Volt: 24 Del. quantity cm3/: 5.5 1000s.: (7.0)

Full-load speed regulation

1/min: 1300 Charge press hPa: 1000

Del. quantity cm3/

1000s.: 59.0...65.0

electromagnet>Volt: 24

Start:

1/min: 100 Speed

Charge press hPa: Del. quantity cm3/: 70.0...130.0

1000s.: 70.0

Shutoff electromagnet>Volt:	24	‡	quantity> cm3/10s: (29.40115.00)
		1	Delivery-quant. and breakaway char.:
Inspection-pump tes	t specifications	+	
Test specifications	in parentheses	†	1nd amond 1/min. 700
Timing-device chara	ataniatia.	T	<pre>1nd speed 1/min: 700 Charge-air pressure-setting</pre>
riming-device chara	cteristic.	Ι	point> hPa: 400
1st speed 1/min:	600	I	LDA-stroke mm: -
Charge press hPa:		1	Shutoff
TD travel mm:	0.401.20	1	electromagnet>Volt: 24
> mm:	(0.101.50)	1	Del. quantity cm3/: 77.5078.50
electromagnet>Volt:		+	> 1000s.: (74.0082.00)
2nd speed 1/min:	750	+	2nd speed 1/min: 1400
Charge press hPa:		+	Charge press. hPa: 1000
	1.301.70	+	Shutoff
> mm:	(0.802.20)	+	electromagnet Volt: 24
Shutoff		+	Del. quantity cm3/: 0.003.00
electromagnet>Volt:		+	> 1000s.: (0.003.00)
3rd speed 1/min:		+	3rd speed 1/min: 1330
Charge press hPa:	1000	+	Charge press. hPa: 1000
TD travel mm:		+	Shutoff
	(1.93.3)	+	electromagnet>Volt: 24
Shutoff		+	Del. quantity_cm3/: 18.058.0
electromagnet>Volt:	24	+	> 1000s.: -
		+	4th speed 1/min: 1300
Supply-pump pressur	e characteristic:	+	Charge press. hPa: 1000
		†	Shutoff
1st speed 1/min:	500	†	electromagnet>Volt: 24
Charge press. hPa:	1000	+	Del. quantity cm3/: 59.065.0
Supply-pump		+	> 1000s.: (56.068.0)
•	- 2.202.80	+	5th speed 1/min: 1250
Shutoff	-	+	Charge press. hPa: 1000
electromagnet>Volt:	24	+	Shutoff
2nd speed 1/min:		+	electromagnet>Volt: 24
Charge press. hPa:	1000	†	Del. quantity cm3/: 76.579.5
Supply-pump	7.00 7.00	†	> 1000s.: (75.081.0)
	3.203.80	†	6th speed 1/min: 1050
Shutoff	7/	+	Charge press. hPa: 1000
electromagnet>Volt:		Ť	Shutoff
3rd speed 1/min:		T	electromagnet>Volt: 24
Charge press. hPa:	1000	†	Del. quantity cm3/: 80.083.0
Supply-pump	4.505.10	Ť	> 1000s.: (78.085.0) 7th speed 1/min: 500
•	4.505.10	T	
Shutoff	2/.	T	Charge press. hPa: - Shutoff
electromagnet>Volt:	24	T	electromagnet>Volt: 24
Overal military at	overflou valves	T	Del. quantity cm3/: 68.569.5
Overlow quantity at	overflow valve.	Ι	> 1000s.: (65.073.0)
1st speed 1/min:	500	I	8th speed 1/min: 750
1st speed 1/min: Charge press. hPa:		Ι	Charge press. hPa: 1000
Shutoff		I	Shutoff
electromagnet>Volt:	24	1	electromagnet>Volt: 24
	37.5082.00	1	Del. quantity cm3/: 84.585.5
quantity> cm3/10s:		1	> 1000s.: (82.088.0)
2nd speed 1/min:		1	1000011 (02.011100.07
Charge press. hPa:		1	
Shutoff	1000	1	Mech. shutoff:
electromagnet>Volt:	24	1	The state of the second
	44.40100.00	+	1st speed
· · · · · · · · · · · · · · · · · · ·		•	•

Charge press. hPa: 1000 Del. quantity cm3/: 0.0...3.0 1000s .: -Shutoff electromagnet>volt: 24 Electr. shutoff: 1/min: 375 1st speed Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1/min: 375 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 8.0...14.0 1000s.: (6.0...16.0) cm3/: 5.5 Dispersion 1000s.: (7.0) 1/min: 500 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...4.00 1000s.: (0.00...4.00) Automatic starting fuel delivery: 1st speed 1/min: 250 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 80.0...140.0 1000s.: -2nd speed 1/min: 450 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 48.0...88.0 1000s.: -Shutoff electromagnet: Cut-in : 10.0 >min voltage : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: -KF mm: 5.0...5.4 MS1 mm: 1.4...1.7 mm: 6.0 SVS max. LDA stroke mm: mm: 34.8...38.8 Ya

mm: 42.8...48.2

Yb

M16

Remarks:

Ya = Distance between VE flange and speed-control lever in idle

position
Measurement point = edge of control
lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : MAN Edition : 27.02.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE6/12F1200R496-1

Type number : 0 460 426 258

Customer Part-No. :

Customer-specific information

Customer : MAN

Engine : D 0826 LF07 DI

Power KW: 140

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 110

Opening

Pressure> bar: 247.00...253.00

Perforated-plate

diameter> mm: 0.5

Test inj. tubing : 1 680 750 017

Outside diameter : 6.00 x Wall>thickness : 2.00

x Length> mm: 840

Start of delivery

Prestroke mm: 0.3

 \rightarrow (from BDC): +-0,02(0.04)

Injection—pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 850 Charge press. hPa: 1000 Setting value mm: 2.00...2.40

Shutoff

electromagnet>Volt: 24

Supply-pump pressure

Speed 1/min: 850 Charge press hPa: 1000

Setting value bar: 7.30...7.90

Shutoff

electromagnet>Volt: 24

Full-load del. with charge press.:

Speed 1/min: 1000 Charge press. hPa: 1000

Del. quantity cm3/

> 1000s.: 91.50...92.50

Shutoff

electromagnet>Volt: 24 Dispersion cm3/: 4.0 > 1000s.: (4.5)

Full-load del. w/out charge press.:

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 59.5...60.5

Shutoff

electromagnet>Volt: 24

Low-idle speed regulation

Speed 1/min: 250

Del. quantity cm3/

> 1000s.: 16.5...23.5

Shutoff

electromagnet>Volt: 24
Del. quantity cm3/: 6.0
> 1000S.: (6.5)

Full-load speed regulation

Speed 1/min: 1280 Charge press hPa: 1000

Del. quantity cm3/

> 1000s.: 62.0...68.0

Shutoff

electromagnet>Volt: 24

Start:

Speed 1/min: 100

Charge press hPa: -

Del. quantity cm3/: 60.0...100.0

mind> 1000s.: 60.0

Shutoff

electromagnet>Volt: 24

Inspection-pump test specifications

tese shertifully	in barencieses	Т		
		+	1nd speed 1/min:	500
Timing-device chara	cteristic:	+	Charge-air pressure	-setting
		+	point> hPa:	450
1st speed 1/min:	750	+	LDA-stroke mm:	7.5
Charge press hPa:		1	Shutoff	
TD travel mm:	0.601.40	1	electromagnet>Volt:	2/.
> mm:	(0.301.70)	T		
		T	Del. quantity cm3/:	92.3093.30
electromagnet>Volt:	24	†		(90.5095.50)
2nd speed 1/min:		+	2nd speed 1/min:	
	1000	+	Charge press. hPa:	1000
TD travel mm:	2.002.40	+	Shutoff	
> mm:	(1.502.90)	1	electromagnet Volt:	24
Shutoff	***************************************	1	Del. quantity cm3/:	
electromagnet>Volt:	24	1		(0.003.00)
3rd speed 1/min:	050	T	3rd speed 1/min:	
		T		
Charge press hPa:	1000	†	Charge press. hPa:	7000
	2.93.7	+	Shutoff	
	(2.64.0)	+	electromagnet>Volt:	
Shutoff		+	Del. quantity cm3/:	0.0015.0
electromagnet>Volt:	24	+	> 1000s.:	
		1	4th speed 1/min:	
Supply-pump pressur	e characteristic:	1	Charge press. hPa:	
anbheh-hamb bi essai	e character istic.	T	Shutoff	1000
A.A 1 A.A. S	500	T		24
1st speed 1/min:		+	electromagnet>Volt:	24
Charge press. hPa:	1000	+	Del. quantity cm3/:	
Supply-pump		+	> 1000s.:	
pressure> bar:	5.506.10	+	5th speed 1/min:	1280
Shutoff		1	Charge press. hPa:	
electromagnet>Volt:	24	1	Shutoff	
2nd speed 1/min:		1	electromagnet>Volt:	2/.
		T		
Charge press. hPa:	1000	Ť	Del. quantity cm3/:	
Supply-pump		†		(60.569.5)
•	7.307.90	+	6th speed 1/min:	
Shutoff		+	Charge press. hPa:	1000
electromagnet>Volt:	24	+++++++	Shutoff	
3rd speed 1/min:		1	electromagnet>Volt:	24
Charge press. hPa:		1	Del. quantity cm3/:	86 9 91 9
Supply-pump	.000	1	> 1000s.:	(85.493.4)
auppry-pump	9.009.60	T		
	7.009.00	Ť	7th speed 1/min:	
Shutoff		†	Charge press. hPa:	7000
electromagnet>Volt:	24	+	Shutoff	
		+	electromagnet>Volt:	
Overlow quantity at	overflow valve:	+	Del. quantity cm3/:	92.197.1
		+	> 1000s.:	(90.698.6)
1st speed 1/min:	500	1	8th speed 1/min:	
Charge press. hPa:		1	Charge press. hPa:	
		T		1000
Shutoff	2/	T	Shutoff	24
electromagnet>Volt:		+	electromagnet>Volt:	
Overflow :	37.5082.00	+	Del. quantity cm3/:	
quantity> cm3/10s:	(22.5097.00)	+		(97.0105.0)
2nd speed 1/min:	1250	+	9th speed 1/min:	500
Charge press. hPa:		1	Charge press. hPa:	
Shutoff		1	Shutoff	
	2/	1	electromagnet>Volt:	2/4
electromagnet>Volt:		T		
	44.40100.00	T	Del. quantity cm3/:	
quantity> cm3/10s:	(29.40175.00)	†	> 1000s.:	(100.6112.6)
		+	10th speed 1/min:	
Delivery-quant. and	breakaway char.:	+	Charge press. hPa:	-
		+	Shutoff	

electromagnet>Volt: 24 Del. quantity cm3/: 59.5...60.5 1000s.: (57.5...62.5) 1/min: 1000 11th speed Charge press. hPa: 1000 Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 91.5...92.5 1000s.: (89.5...94.5) Mech. shutoff: 1st speed 1/min: 1200 Charge press. hPa: 1000 Del. quantity cm3/: 0.0...3.0 1000s.: -Shutoff electromagnet>volt: 24 Electr. shutoff: 1/min: 250 1st speed Charge press. hPa: -Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Shutoff electromagnet>volt: -Idle delivery: 1st speed 1/min: 250 Shutoff electromagnet>Volt: 24
Del. quantity cm3/: 16.5...23.5 1000s.: (14.5...25.5) cm3/: 6.0 Dispersion 1000s.: (6.5) 1/min: 400 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 0.00...3.00 1000s.: (0.00...3.00) Automatic starting fuel delivery: 1/min: 330 1st speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 70.0...100.0 1000s.: -1/min: 430 2nd speed Shutoff electromagnet>Volt: 24 Del. quantity cm3/: 40.0...70.0 1000s.: -

Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation K mm: -KF mm: KOT mm: 0.9...1.3 MS LDA stroke mm: 7.5 mm: 37.4...40.4 mm: 44.2...49.4 Yb

Remarks:

Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Shutoff electromagnet:

Note inst. in remarks column

Test scheet : PEU

: 11.03.96 Edition

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/8F2500R611-1

Type number : 0 460 484 099

Customer Part-No. :

Customer-specific information

Customer : PSA

: TUD 5-L3 Engine

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil

return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 127.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00

x Wall>thickness : 2.00

x Length> mm: 450

Start of delivery

Prestroke mm: -

> (from BDC): -

Start of delivery block

Piston stroke mm: 0.8

Outlet > : A

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1500 Speed

Setting value mm: 4.80...5.20

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1500

Setting value bar: 6.00...6.60

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1500

Del. quantity cm3/

1000s.: 23.5...24.5

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 1000s.: (3.0)

Low-idle speed regulation

1/min: 350 Speed

Del. quantity cm3/

1000s.: 11.0...13.0

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.0 1000s.: (3.0)

Residual-Delivery Setting

1/min: 500 Speed

Del. quantity cm3/

1000s.: 1.5...2.5

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2650

Del. quantity cm3/

1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 200

Del. quantity cm3/: 39.00...41.00 mind> 1000s.; 32.50

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 800

TD travel mm: 1.20...2.00

> mm: (0.90	2.30) +	Del. quantity cm3/:	
electromagnet>Volt: 12	+		(8.016.0)
2nd speed 1/min: 1500	+	3rd speed 1/min:	2580
TD travel mm: 4.805	.20	Shutoff	
> mm: (4.30	5.70)	electromagnet>Volt:	12
Shutoff	1	Del. quantity cm3/:	17.023.0
electromagnet>Volt: 12	1	> 1000s :	(15.025.0)
3rd speed 1/min: 2200	1	4th speed 1/min:	
TD travel mm: 7.908	. ZO 1	Shutoff	2430
> mm: (7.60		electromagnet>Volt:	10
	7.007		
Shutoff	Ť	Del. quantity cm3/:	
electromagnet>Volt: 12	Ť		(24.828.2)
4th speed 1/min: 2450	1	5th speed 1/min:	1500
TD travel mm: 9.501	0.1	Shutoff	
> mm: -	+	electromagnet>Volt:	
Shutoff	+	Del. quantity cm3/:	
electromagnet>Volt: 12	+		(21.8026.20)
-	+	6th speed 1/min:	600
Supply-pump pressure charact	eristic:	Shutoff	
to any to a second and a second a second and a second and a second and a second and a second and	1	electromagnet>Volt:	12
1st speed 1/min: 800	1	Del. quantity cm3/:	
Supply-pump	1		(22.528.5)
pressure> bar: 4.304	on 1	1000011	(22.51.120.5)
Shutoff	.,,		
	Ť		
electromagnet>Volt: 12	Ť		
2nd speed 1/min: 1500	Ť	Electr. shutoff:	
Supply-pump	†	4	750
pressure> bar: 6.006	.60 +	1st speed 1/min:	
Shutoff	+	Del. quantity cm3/:	
electromagnet>Volt: 12	+		(0.003.00)
3rd speed 1/min: 2200	+	Shutoff	
Supply-pump	+	electromagnet>volt:	-
pressure> bar: 7.808	.40	_	
Shutoff	1	Damper set qty.:	
electromagnet>Volt: 12	1		
	1	LFG-setting:	
Overlow quantity at overflow	valve:	a. c cccog.	
over ton quarterly at over teem	1	Idle delivery:	
1st speed 1/min: 600	1	race actively.	
	T	1st speed 1/min	3.4n
Shutoff	T		טכנ
electromagnet>Volt: 12	T	Shutoff	40
Overflow : 41.70		electromagnet Volt:	
quantity> cm3/10s: (26.70	ל מוי.וטוי.	Del. quantity cm3/:	
2nd speed 1/min: 2450	†		(8.016.0)
Shutoff	+	Dispersion cm3/:	
electromagnet>Volt: 12	+	> 1000s.:	(3.0)
Overflow : 55.60	139.00 +		
quantity> cm3/10s: (40.60	.154.00)	High Idle:	
	+	•	
Delivery-quant. and breakaway	/ char.:	1st speed 1/mi:	475
out to the qualitation and at containing		Shutoff	
	1	electromagnet>Volt:	12
1nd speed	\mathbf{I}	Del. quantity cm3/:	
	T		(8.016.0)
Shutoff	Ť	- 10005.:	(0.0 10.0)
electromagnet>Volt: 12	t	Dana dalan	
Del. quantity cm3/: 0.003		Rest delivery:	
> 1000s.: (0.003	·.uu> +		500
2nd speed 1/min: 2650	+	1st speed 1/min:	ンロリ
Shutoff	+	Shutoff	
electromagnet Volt: 12	+	electromagnet>Volt:	12

Del. quantity cm3/: 1.5...2.5 1000s.: (0.0...4.0) Part-load del.at 3rd inj.-qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement-ARF) Spacing mm: 12.0 1/min: 1000 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 14.3...16.3 1000s.: (11.3...19.3) Automatic starting fuel delivery: 1/min: 340 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 12.5...32.5 > 1000s.: -2nd speed 1/min: 250 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.0...69.0 1000s.: -4th speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 39.00...41.00 1000s.: (32.5...47.5) Shutoff electromagnet: Cut-in >min voltage : 10.0 Rated voltage : 12.0 Mounting and assembly dimensions: Designation mm: 3.6...3.8 K KF mm: -MS mm: 0.8...1.2 mm: 32.0...36.0 Ya mm: 52.9...61.9 Yb Remarks: Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : PEU

Edition : 11.03.96

replaces :-

Calibrating oil : ISO-4113

Injection pump : VE4/8F2500R611-2

Type number : 0 460 484 100

Customer Part-No. :

Customer-specific information

Customer : PSA

Engine : TUD 5-L3

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil

return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar: 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 127.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00

x Wall>thickness : 2.00

x Length> mm: 450

Start of delivery

Prestroke mm: -

> (from BDC): -

Start of delivery block

Piston stroke mm: 0.8

Outlet > : A

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1500

Setting value mm: 4.80...5.20

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1500

Setting value bar: 6.00...6.60

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1500

Del. quantity cm3/

> 1000s.: 23.5...24.5

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 > 1000s.: (3.0)

Low-idle speed regulation

Speed 1/min: 350

Del. quantity cm3/

> 1000s.: 11.0...13.0

Shutoff

Residual-Delivery Setting

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 1.5...2.5

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2650

Del. quantity cm3/

> 1000s.: 10.00...14.00

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 200

Del. quantity cm3/: 39.00...41.00

mind> 1000s.: 32.50

Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 800

TD travel mm: 1.20...2.00

> mm: electromagnet>Volt:	(0.902.30)	+ Del. quantity cm3/: 10.014.0 + > 1000s.: (8.016.0)
2nd speed 1/min:		3rd speed 1/min: 2580 Shutoff
	(4.305.70)	+ electromagnet>Volt: 12
Shutoff	42	Del. quantity cm3/: 17.023.0
electromagnet>Volt: 3rd speed 1/min:		+ > 1000s.: (15.025.0) + 4th speed 1/min: 2450
	7.908.70	Shutoff
> mm:	(7.609.00)	electromagnet>Volt: 12
Shutoff	42	Del. quantity cm3/: 25.027.0
electromagnet>Volt: 4th speed 1/min:		> 1000s.: (24.828.2) - 5th speed 1/min: 1500
TD travel mm:	9.5010.1	Shutoff
> mm:		electromagnet>Volt: 12
Shutoff	43	Del. quantity cm3/: 23.5024.50
electromagnet>Volt:	12	> 1000s.: (21.8026.20) 6th speed 1/min: 600
Supply-pump pressur	e characteristic:	Shutoff
		electromagnet>Volt: 12
1st speed 1/min:	600	Del. quantity cm3/: 24.027.0 > 1000s.: (22.528.5)
Supply-pump pressure> bar:	4.304.90	10008.: (22.328.3)
Shutoff		1
electromagnet>Volt:		+
2nd speed 1/min:	1500	Electr. shutoff:
Supply-pump pressure> bar:	6.006.60	1st speed 1/min: 350
Shutoff		Del. quantity cm3/: 0.003.00
electromagnet>Volt:		> 1000s.: (0.003.00)
3rd speed 1/min:	2200	Shutoff
Supply-pump pressure> bar:	7.808.40	+ electromagnet>volt: -
Shutoff		Damper set qty.:
electromagnet>Volt:	12	+
Overlow quantity at	overflow valve.	LFG-setting:
over tow quantity at	over row varve.	Idle delivery:
1st speed 1/min:	600	
Shutoff	40	1st speed 1/min: 350
<pre>electromagnet>Volt: Overflow :</pre>	41.7086.10	Shutoff
quantity> cm3/10s:		Del. quantity cm3/: 11.013.0
2nd speed 1/min:		> 1000s.: (8.016.0)
Shutoff	42	Dispersion cm3/: 2.0 > 1000s.: (3.0)
<pre>electromagnet>Volt: Overflow :</pre>	55.60139.00	10005.: (5.0)
quantity> cm3/10s:		High Idle:
Delivery-quant. and	breakaway char.:	1st speed 1/mi: 475
	•	Shutoff electromagnet>Volt: 12
1nd speed 1/min:	2800 -	- Del. quantity cm3/: 11.013.0
Shutoff	42	> 1000s.: (8.016.0)
<pre>electromagnet>Volt: Del. quantity cm3/:</pre>	14 0 00 3 00	Rest delivery:
	(0.003.00)	- NOSE GETTYETY.
2nd speed 1/min:		- 1st speed 1/min: 500
Shutoff	40	- Shutoff
electromagnet Volt:	72	electromagnet>Volt: 12

Del. quantity cm3/: 1.5...2.5 1000s.: (0.0...4.0) Part-load del.at 3rd inj.-qty. terza fermo della portata stop (EGR set) scarico) (ARF) gaz d'échappement-ARF) mm: 12.0 Spacing 1/min: 1000 1st speed Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 14.3...16.3 1000s.: (11.3...19.3) Automatic starting fuel delivery: 1st speed 1/min: 340 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 12.5...32.5 1000s.: -2nd speed 1/min: 250 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 35.0...69.0 1000s.: -4th speed 1/min: 200 Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 39.00...41.00 1000s.: (32.5...47.5) Shutoff electromagnet: Cut-in : 10.0 >min voltage : 12.0 Rated voltage Mounting and assembly dimensions: Designation mm: 3.6...3.8 KF mm: mm: 0.8...1.2 MS mm: 32.0...36.0 Ya mm: 52.9...61.9 Yb Remarks: : Ya = Distance between VE flange and speed-control lever in idle position Measurement point = edge of control Lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : REN

Edition : 11.03.96

replaces : -

Calibrating oil : ISO-4113

Injection pump : VE4/8F2300R652

Type number : 0 460 484 103

Customer Part-No. :

Customer—specific information Customer : RENAULT

Engine : F80-646

Power KW: 45

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening |

Pressure> bar: 127.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00

x Length> mm: 458

Start of delivery

Prestroke mm: > (from BDC): -

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250

Setting value mm: 3.50...3.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

Speed 1/min: 1250

Setting value bar: 5.10...5.70

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

> 1000s.: 31.0...32.0

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 > 1000s.: (3.0)

Low-idle speed regulation

Speed 1/min: 410

Del. quantity cm3/

> 1000s.: 7.50...11.5

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.5 > 1000s.: (2.5)

Residual-Delivery Setting

Speed 1/min: 500

Del. quantity cm3/

> 1000s.: 2.5...3.5

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2450

Del. quantity cm3/

> 1000s.: 21.50...27.50

Shutoff

electromagnet>Volt: 12

Start:

Speed 1/min: 100

Del. quantity cm3/: 40.0...60.0

mind> 1000s.: 40.0

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj. -qty.dif.measurement:

Speed 1/min: 1250

Inj.-qty. cm3/

difference> 1000s.: - 6.5...12.5 *

Shutott

electromagnet>Volt: 12
TD-travel dif.measurement

-	
1.Speed 1/min: 1250 -	1nd speed 1/min: 2950
TD-travel -	Shutoff
difference> mm: - 0.60.8 ★ -	electromagnet>Volt: 12
Shutoff -	Del. quantity cm3/: 0.005.00
electromagnet>Volt: 12	> 1000s.: (0.005.00)
etecti omagnet vott. 12	2nd speed 1/min: 2650
7	
Inspection pump test specifications -	Shutoff
Test specifications in parentheses -	electromagnet Volt: 12
•	Del. quantity cm3/: 5.513.5
Timing-device characteristic:	> 1000s.: (4.514.5)
7	- 3rd speed 1/min: 2450
1st speed 1/min: 600	Shutoff
TD travel mm: 0.801.60 -	electromagnet>Volt: 12
> mm: (0.601.80)	Del. quantity cm3/: 21.527.5
electromagnet>Volt: 12	> 1000s.: (20.528.5)
2nd speed 1/min: 1250	4th speed 1/min: 2250
	Shutoff
	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 31.133.1
electromagnet>Volt: 12	> 1000s.: (29.834.4)
3rd speed 1/min: 2000	- 5th speed 1/min: 2000
TD travel mm: 5.706.50	Shutoff
> mm: (5.506.70)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 31.5033.50
electromagnet>Volt: 12	> 1000s.: (30.2034.80)
	6th speed 1/min: 1625
Supply-pump pressure characteristic:	- Shutoff
Supply pump pressure character istre.	
Ant many Almina (OO	electromagnet>Volt: 12
1st speed 1/min: 600	Del. quantity cm3/: 29.532.5
Supply-pump -	> 1000s.: (28.733.3)
pressure> bar: 3.303.90	- 8th speed
Shutoff	Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
2nd speed 1/min: 1250	Del. quantity cm3/: 31.032.0
Supply-pump -	- > 1000s.: (29.233.8)
pressure> bar: 5.105.70	- 9th speed 1/min: 600
Shutoff	Shutoff
electromagnet>Volt: 12	electromagnet>Volt: 12
3rd speed 1/min: 2000	- Del. quantity cm3/: 30.433.4
	1000 100 100 100
Supply-pump	- > 1800S.; (29.634.2)
pressure> bar: 7.207.80	
Shutoff	<u>.</u>
electromagnet>Volt: 12	
+	- Electr. shutoff:
Overlow quantity at overflow valve:	
<u> </u>	- 1st speed 1/min: 410
1st speed	- Del. quantity cm3/: 0.003.00
Shutoff	- > 1000s.: (0.003.00)
electromagnet>Volt: 12	- Shutoff
Overflow : 41.7086.10	- electromagnet>volt: -
	etectionagnet/vott.
quantity> cm3/10s: (26.70101.10)	• Bananan and mba
2nd speed 1/min: 2250	Damper set qty.:
Shutoff	•
electromagnet>Volt: 12	- LFG-setting:
Overflow : 55.60139.00	•
quantity> cm3/10s: (40.60154.00)	- Idle delivery:
1	•
Delivery-quant. and breakaway char.:	- 1st speed 1/min: 410
1	Shutoff

electromagnet Volt: 12 Del. quantity cm3/: 7.5011.5 > 1000s.: (5.513.5) Dispersion cm3/: 2.5 > 1000s.: (2.5)	<pre>pressure > : - 0.10.3 # difference> bar: - Shutoff electromagnet>Volt: 12 Automatic starting fuel delivery:</pre>
High Idle:	+ 1st speed 1/min: 310
1st speed 1/mi: 500 Shutoff	+ Shutoff + electromagnet>Volt: 12
electromagnet>Volt: 12 Del. quantity cm3/: 7.011.0 > 1000s.: (5.013.0)	Del. quantity cm3/: 25.045.0 > 1000s.: -
Rest delivery:	+ 2nd speed 1/min: 210 + Shutoff + electromagnet>Volt: 12
1st speed 1/min: 500 Shutoff	Del. quantity cm3/: 45.075.0 1000s.: -
electromagnet>Volt: 12 Del. quantity cm3/: 1.05.0 > 1000s.: (1.05.0)	+ 4th speed 1/min: 110 + Shutoff
Load-dependent start of delivery: Injqty.dif.measurement:	electromagnet>Volt: 12 Del. quantity cm3/: 40.0070.00 1000s.: -
1st speed	Shutoff electromagnet:
difference> 1000S.: - Shutoff	Cut-in - >min voltage : 10.0
electromagnet>Volt: 12 2nd speed 1/min: 1250 Injqty. cm3/: 2.08.0 " Z	+ Rated voltage : 12.0 + Mounting and assembly dimensions:
difference> 1000S.: - Shutoff	- Designation
electromagnet Volt: 12 3rd speed 1/min: 1250	+ K mm: 3.23.4 + KF mm: 5.35.5
Charge press. hPa: ALFB Injqty. cm3/: 2.08.0 Z difference> 1000S.: (12 V)	+ MS
Shutoff electromagnet>Volt: 12	Ya mm: 30.334.3 + Yb mm: 64.176.9
TD-travel dif.measurement:	Remarks:
correttore anticipo iniezione (SV): 1st speed 1/min: 1250	:
TD-travel : -1.21.6 " difference> mm: - (1.11.7) Shutoff	Ya = Distance between VE flange and speed-control lever in idle position
electromagnet>Volt: 12 2nd speed 1/min: 1250	Measurement point = edge of control lever on drive end
Charge press. hPa: ALFB TD-travel: 0.00.6	
difference> mm: (12 V)	+ Yb = Distance between VE flange and speed-control lever in rated speed
electromagnet>Volt: 12	<pre>position Measurement point = edge of control lever on distributor-head end</pre>
SP pressdif.measurement: pompa di mandata (FP): 1st speed 1/min: 1250 - Supply pump-	tever on distributor-nead end

Z = Absolute delivery

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : REN Edition : 11.03.96 replaces : ISO-4113 Calibrating oil Injection pump : VE4/8F2300R652-1 Type number : 0 460 484 104 Customer Part-No. : Customer-specific information Customer : RENAULT Engine : F8Q-646 Power KW: 45 TEST BENCH REQUIREMENTS Overflow restricti: 1 463 456 303 Calibrating-oil return>temp. > °C with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00 Inlet press., bar : 0.30...0.40 Calibrating nozzle-holder : 1 688 901 022 assembly> Opening Pressure> bar: 127.00...133.00 Test inj. tubing : 1 680 750 073 Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -

(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed

Setting value mm: 3.50...3.90

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250

Setting value bar: 5.10...5.70

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

1000s.: 31.0...32.0

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.5 1000s.: (3.0)

Low-idle speed regulation

Speed 1/min: 410

Del. quantity cm3/

1000s.: 7.50...11.5

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.5 1000s.: (2.5)

Residual-Delivery Setting

1/min: 500

Del. quantity cm3/

1000s.: 2.5...3.5

Shutoff

electromagnet Volt: 12

Full-load speed regulation

1/min: 2450 Speed

Del. quantity cm3/

1000s.: 21.50...27.50

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 40.0...60.0

mind> 1000s.: 40.0

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

Speed 1/min: 1250

Inj.-qty. cm3/

difference> 1000s.: - 6.5...12.5 *

Shutoff

electromagnet>Volt: 12 TD-travel dif.measurement

		+		
1.Speed 1/mir	: 1250	+	1nd speed 1/min:	2950
TD-travel		+	Shutoff	
	: - 0.60.8 *	1	electromagnet>Volt:	12
Shutoff		+	Del. quantity cm3/:	
electromagnet>Volt	: 12	1		(0.005.00)
		1	2nd speed 1/min:	
Inspection-pump te	st specifications	1	Shutoff	2030
Test specification		1	electromagnet Volt:	12
lest specification	5 III parentileses	Ι	Del. quantity cm3/:	
Timing-device char	netonistica	T	> 1000s.:	(4.514.5)
ining device char	acteristic.	T	3rd speed 1/min:	
1-+	. 400	T		2400
1st speed 1/min		Ť	Shutoff	43
	: 0.801.60	+	electromagnet>Volt:	
	: (0.601.80)	†	Del. quantity cm3/:	
electromagnet>Volt		†		(20.528.5)
2nd speed 1/min		+	4th speed 1/min:	2250
	: 3.503.90	+	Shutoff	
	: (3.204.20)	+	electromagnet>Volt:	
Shutoff		+	Del. quantity cm3/:	
electromagnet>Volt	: 12	+		(29.834.4)
3rd speed 1/min	: 2000	+	5th speed 1/min:	2000
TD travel mm	: 5.706.50	+	Shutoff	
	: (5.506.70)	+	electromagnet>Volt:	12
Shutoff		+	Del. quantity cm3/:	31.5033.50
electromagnet>Volt	: 12	+	> 1000s.:	(30.2034.80)
		1	6th speed 1/min:	
Supply-pump pressu	re characteristic:	1	Shutoff	1 4 4 5
cappey pamp pressu	e offer about 15010.	1	electromagnet>Volt:	12
1st speed 1/min	• 400	1	Del. quantity cm3/:	
•	. 555	I		(28.733.3)
Supply-pump	: 3.303.90	T	8th speed 1/min:	
	: 3.303.90	T		1230
Shutoff	. 43	Ť	Shutoff	40
electromagnet>Voit		Ť	electromagnet>Volt:	
2nd speed 1/min	: 1230	+	Del. quantity cm3/:	
Supply-pump	F 40 F 70	†		(29.233.8)
	: 5.105.70	+	9th speed 1/min:	600
Shutoff		+	Shutoff	4.5
electromagnet>Volt		+	electromagnet>Volt:	12
	: 2000	+	Del. quantity cm3/:	30.433.4
Supply-pump		+	> 1000s.:	(29.634.2)
pressure> bar	: 7.207.80	+		
Shutoff		+		
electromagnet>Volt	: 12	+		
•		+	Electr. shutoff:	
Overlow quantity a	t overflow valve:	+		
		1	1st speed 1/min:	410
1st speed 1/min	: 600	1	Del. quantity cm3/:	
Shutoff		1		(0.003.00)
electromagnet>Volt	. 12	1	Shutoff	(01001110100)
	41.7086.10	1	electromagnet>volt:	_
quantity> cm3/10s		I	etectionagilet>vott.	
		T	Dampan oot atv	
2nd speed 1/min		T	Damper set qty.:	
Shutoff	. 43	T	LFC mattings	
electromagnet>Volt		†	LFG-setting:	
	55.60139.00	†	~ /ii. i .	
quantity> cm3/10s	(40.60154.00)	+	Idle delivery:	
		+		
Delivery-quant. and	i breakaway char.:	+	1st speed 1/min:	410
		+	Shutoff	

electromagnet volt: 12	+ pressure > : - U.1U.3 #
Del. quantity cm3/: 7.5011.5 > 1000s.: (5.513.5)	<pre>+ difference> bar: - + Shutoff</pre>
Dispersion cm3/: 2.5	+ electromagnet>Volt: 12
> 1000s.: (2.5)	T eterti ollagilet 2000. 12
10000: (2.3)	Automatic starting fuel delivery:
High Idle:	The content of the co
	+ 1st speed 1/min: 310
1st speed 1/mi: 500	+ Shutoff
Shutoff	+ electromagnet>Volt: 12
electromagnet>Volt: 12	+ Del. quantity cm3/: 25.045.0
Del. quantity cm3/: 7.011.0	+ > 1000s.: -
> 10008.: (5.013.0)	+
	+ 2nd speed 1/min: 210
Rest delivery:	+ Shutoff
	+ electromagnet>Volt: 12
1st speed 1/min: 500	+ Del. quantity cm3/: 45.075.0
Shutoff	+ > 1000s.: -
electromagnet>Volt: 12	†
Del. quantity cm3/: 1.05.0	+ 4th speed 1/min: 110
> 10008.: (1.05.0)	+ Shutoff
	+ electromagnet>Volt: 12
Load-dependent start of delivery:	+ Del. quantity cm3/: 40.0070.00
Injqty.dif.measurement:	+ > 1000s.: -
1st speed	Chistoff alactroments
Injqty. cm3/ : -6.08.0 #	+ Shutoff electromagnet:
difference> 1000s.: -	I Cut-in
Shutoff	>min voltage : 10.0
electromagnet>Volt: 12	Rated voltage : 12.0
2nd speed 1/min: 1250	Thatea vottage . 72.0
Inj.—qty. cm3/: 2.08.0 " Z	# Mounting and assembly dimensions:
difference> 1000s.: -	
Shutoff	+ Designation
electromagnet Volt: 12	+ K mm: 3.23.4
3rd speed 1/min: 1250	+ KF mm: 5.35.5
Charge press. hPa: ALFB	+ MS mm: 1.11.5
Injqty. cm3/: 2.08.0 Z	$+$ XK mm: MA β A= 0,8
difference> 1000s.: (12 V)	+ XL mm: (MIKRO.)
Shutoff	+ Ya mm: 30.334.3
electromagnet>Volt: 12	+ Yb mm: 64.176.9
	+
TD-travel dif.measurement:	+ Remarks:
correttore anticipo injezione (SV):	:
1st speed 1/min: 1250	
TD-travel : - 1.21.6 "	Ya = Distance between VE flange and
difference> mm: - (1.11.7)	+ speed-control lever in idle
Shutoff	position
electromagnet>Volt: 12	+ Measurement point = edge of control + lever on drive end
2nd speed 1/min: 1250	t cever on arive end
Charge press. hPa: ALFB TD-travel : 0.00.6	Ţ
difference> mm: (12 V)	Yb = Distance between VE flange and
Shutoff	+ speed-control lever in rated speed
electromagnet>Volt: 12	position
Controlling los fortille	+ Measurement point = edge of control
SP pressdif.measurement:	lever on distributor-head end
pompa di mandata (FP):	+
1st speed 1/min: 1250	+
Supply pump-	+
* * * * * * * * * * * * * * * * * * *	•

Z = Absolute delivery

Permissible port/port scatter with stop test, electrical = max. 5.0 ccm/1000 S.

Supply-pump pressure BOSCH-INJ.-PUMP TEST SPECIFICATIONS 1/min: 1500 Speed Note inst. in remarks column Setting value bar: 6.30...6.90 KSB/AFB Test scheet : VW valve > Volt: 12 Edition : 15.03.96 Shutoff replaces electromagnet>Volt: 12 Calibrating oil : ISO-4113 Full-load del. w/out charge press.: Injection pump : VE4/8F2400R677 Type number : 0 460 484 108 1/min: 1500 Speed Del. quantity cm3/ Customer Part-No. : 1000s.: 31.5...32.5 11 KSB/AFB > Volt: 12 Customer-specific information valve Customer Shutoff electromagnet>Volt: 12 Dispersion cm3/: 2.5 Engine : 1.6 L 1000s.: (3.0) TEST BENCH REQUIREMENTS Low-idle speed regulation Overflow restricti: 1 463 456 303 Speed 1/min: 400 Calibrating-oil Del. quantity cm3/ return>temp. > °C 1000s.: 13.0...17.0 with>thermometer> : 40.00...48.00 KSB/AFB Electronically> : 42.00...50.00 valve > Volt: 12 Shutoff Inlet press., bar: 0.30...0.40 electromagnet>Volt: 12 Del. quantity cm3/: 2.5 1000s.: (3.5) Calibrating nozzle-holder assembly> : 1 688 901 000 Full-load speed regulation Opening | bar: 144.00...150.00 Pressure> 1/min: 2550 Del. quantity cm3/ 1000s.: 16.0...22.0 Test inj. tubing : 1 680 750 017 KSB/AFB valve Volt: 12 Outside diameter : 6.00 Shutoff x Wall>thickness : 2.00 electromagnet>Volt: 12 x Length> mm: 840 Start: Start of delivery Speed 1/min: 100 Prestroke mm: -Del. quantity cm3/: 31.5...61.5 (from BDC): -1000s.: 31.5 mind> Injection-pump setting values KSB/AFB Volt: 12 Test specifications in parentheses Valve Shutoff electromagnet>Volt: 12 Timing-device travel Inspection-pump test specifications 1/min: 1500 Setting value mm: 3.40...3.80 Test specifications in parentheses AFB/AFB Volt: 12 Timing-device characteristic: valve > Shutoff 1/min: 600 electromagnet>Volt: 12 1st speed

mm: 1.20...2.40

TD travel

	(0, 60, 0, 00)		MOD /AFD	
	(0.802.80)	+	KSB/AFB	
KSB/AFB		+	valve > Volt: 12	
valve > Volt:	-	+	Shutoff	
electromagnet>Volt:		1	electromagnet>Volt: 12	
2nd speed 1/min:		1	Overflow : 55.60139.00	
	1.402.20	T	. 33.00137.00	۰,
		+	quantity> cm3/10s: (40.60154.00	J
	(1.102.50)	+		
KSB/AFB		+	Delivery-quant. and breakaway char.	. :
valve > Volt:	12	+		
Shutoff		1		
	12	- [1nd speed 1/min: 2800	
electromagnet>Volt:		T		
3rd speed 1/min:	1500	Ť	KSB/AFB	
	3.403.80	+	valve > Volt: 12	
> mm:	(3.004.20)	+	Shutoff	
KSB/AFB		+	electromagnet>Volt: 12	
valve > Volt:	12	1	Del. quantity cm3/: 0.003.00	
Shutoff		- 1	> 1000s.: (0.003.00)	
	13	T		
electromagnet>Volt:		+	2nd speed 1/min: 2650	
4th speed 1/min:	2400	+	KSB/AFB	
TD travel mm:	6.27.0	+	valve > Volt: 12	
	(5.97.3)	1	Shutoff	
KSB/AFB	(317111113)	1	electromagnet Volt: 12	
	40	T		
valve > Volt:	12	†	Del. quantity cm3/: 4.012.0	
Shutoff		+	> 1000s.: (3.013.0)	
electromagnet>Volt:	12	+	3rd speed 1/min: 2550	
.		1	KSB/AFB	
Supply-pump pressur	o chanactonistic:	1	valve > Volt: 12	
authra-haut hiseasai	e characteristic.	T		
	4	†	Shutoff	
1st speed 1/min:	600	+	electromagnet>Volt: 12	
Supply-pump		+	Del. quantity cm3/: 17.023.0	
	3.604.20	+	> 1000s.: (16.024.0)	
KSB/AFB		1	4th speed 1/min: 2400	
valve > Volt:	12	1	KSB/AFB	
	12	T		
Shutoff	4.0	†	valve > Volt: 12	
electromagnet>Volt:	12	+	Shutoff	
2nd speed 1/min:	1500	+	electromagnet>Volt: 12	
Supply-pump		+	Del. quantity cm3/: 28.030.0	
pressure> bar:	6.306.90	1	> 1000s.: (27.031.0)	
	0.500.70		5th speed 1/min: 1500	
KSB/AFB	43	T		
<pre>valve > Volt:</pre>	72	t	KSB/AFB	
Shutoff		+	valve > Volt: 12	
electromagnet>Volt:	12	+	Shutoff	
3rd speed 1/min:	2400	+	electromagnet>Volt: 12	
Supply-pump		1	Del. quantity cm3/: 31.5032.50	
	9.009.60	1	> 1000s.: (30.034.0)	
	7.007.00	T		
KSB/AFB		†	6th speed 1/min: 600	
valve > Volt:	12	+	KSB/AFB	
Shutoff		+	valve > Volt: 12	
electromagnet>Volt:	12	+	Shutoff	
otosti omagi iosi vetti	•	1	electromagnet>Volt: 12	
Original and annual days and	avantlas valvas	T	Del. quantity cm3/: 24.027.0	
Overlow quantity at	over tow valve:	T		
		†	> 1000s.: (22.528.5)	
1st speed 1/min:	600	+		
KSB/AFB		+		
valve > Volt:	12	1		
		1	Electr. shutoff:	
Shutoff	42	T	cterti. Shutulii	
electromagnet>Volt:		†		
	44.4088.80	+	1st speed 1/min: 475	
quantity> cm3/10s:	(29.40103.89)	+	Del. quantity cm3/: 0.003.00	
2nd speed 1/min:		+	> 1000s.: (0.003.00)	
	-			

Shutoff			>min voltage : 10.0
electromagnet>volt:	-	+	Rated voltage : 12.0
KSB/AFB		+	-
valve > Volt:	12	†	Mounting and assembly di
Idle delivery:			Designation K mm: 3.2.
1st speed 1/min:	ረብበ -		KF mm: 5.2.
>KSB/AFB	100		MS mm: 1.6.
	. 43		
<pre>valve > Volt: Shutoff</pre>			Ya mm: 39.4 Yb mm: 45.8
electromagnet>Voit:	12	+	
Del. quantity cm3/:	13.017.0	+	Remarks:
> 1000s.:	(9.520.5)	+	:
Dispersion cm3/:		1	•
> 1000s.:		1	Ya = Distance between VE
2nd speed 1/min:	300		speed-control lever in i
KSB/AFB			position
valve > Volt:	12	+	Measurement point = edge
Shutoff		+	lever on drive end
electromagnet>Volt:	12	1	
Del. quantity cm3/:	2/ 0 30 0	1	
bet. quantity chor:	24.030.0	T	Mr B A
	(21.532.5)		Yb = Distance between VE
3rd speed 1/min:	1000	+	speed-control lever in r
KSB/AFB		+	position
valve > Volt:	12	1	Measurement point = edg
Shutoff			lever on distributor-hea
electromagnet>Volt:	12		tever on arser abaco. Hea
etettrollagilet/vott.	0.0 7.0	T	
Del. quantity cm3/:		T	
> 1000s.:		+	
		+	
Automatic starting	fuel delivery:	<u>†</u>	
1st speed 1/min:	350	+	
KSB/AFB		+	
valve > Volt:	12	+	
Shutoff		+	
electromagnet>Volt:	12	1	
Del. quantity cm3/:		1	
		T	
> 1000s.:	-	T	
		+	
2nd speed 1/min:	500	+	
KSB/AFB		+	
valve > Volt:	12	+	
Shutoff		1	
electromagnet>Volt:	12	1	
		T	
Del. quantity cm3/:		T	
> 1000s.:	**In	†	
		+	
4th speed 1/min:	100	+	
(SB/AFB		+	
valve > Volt:	12	1	
Shutoff	T flam	1	
	12	T	
electromagnet>Volt:		T	
Del. quantity cm3/:		t	
> 1000s.:	-	+	
		+	
Shutoff electromagne	et:	+	
		+	
Cut-in		+	
MB 111		1	

imensions:

...3.4 ...5.6 ...2.041.4 3...58.7

flange and of control

flange and rated speed ge of control ad end

Cut-in

Note inst. in remarks column

Test scheet : PEU : 11.03.96 Edition

replaces

Calibrating oil : ISO-4113

Injection pump : VE4/8F2500R425-13 Type number : 0 460 484 109

Customer Part-No. :

Customer-specific information

Customer : PSA

: XUD9 A L3 Engine

KW: 51 Power

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

: 1 688 901 022 assembly>

Opening

bar: 127.00...133.00 Pressure>

Test ini. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -(from BDC): -

Start of delivery block Piston stroke mm: 0.3 Outlet > : A

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1250 Speed

Setting value mm: 3.30...3.70

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1250

Setting value bar: 5.70...6.30

Shutoff

electromagnet>Volt: 12

Full-load del. w/out charge press.:

Speed 1/min: 1250

Del. quantity cm3/

1000s.: 29.7...30.7

Shutoff

electromagnet>Volt: 12 Dispersion cm3/: 2.0 1000s.: (3.0)

Low-idle speed regulation

Speed 1/min: 400

Del. quantity cm3/

· 1000s.: 12.0...14.0 >

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.0 1000s.: (3.0)

Residual-Delivery Setting

1/min: 500 Speed

Del. quantity cm3/

1000s.: 4.5...5.5

Shutoff

electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2650

Del. quantity cm3/

1000s.: 9.00...13.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Speed

Del. quantity cm3/: 46.00...48.00

1000s.: 39.50 mind>

Shutoff

electromagnet>Volt: 12

Load-dependent start of delivery:

Inj.-qty.dif.measurement:

1/min: 1250 Speed

Ini.-aty. cm3/

difference> 1000S.: -4.0...10.0 * quantity> cm3/10s: (40.60...154.00) Shutoff electromagnet>Volt: 12 Delivery-quant. and breakaway char .: TD-travel dif.measurement 1/min: 1250 1/min: 2900 1.Speed 1nd speed TD-travel Shutoff mm: -0.9...1.1 *difference> electromagnet>Volt: 12 Del. quantity cm3/: 0.00...3.00 > 1000s.: (0.00...3.00)
2nd speed 1/min: 2650 Shutoff electromagnet>Volt: 12 2nd speed Inspection-pump test specifications Shutoff Test specifications in parentheses electromagnet Volt: 12 Del. quantity cm3/: 9.0...13.0 > 1000s.: (7.0...15.0) Timing-device characteristic: 1/min: 2500 3rd speed 1/min: 800 1st speed Shutoff electromagnet>Volt: 12
Del. quantity cm3/: 19.5...25.5
> 1000S.: (17.5...27.5)
4th speed 1/min: 2200 mm: 0.40...1.20 TD travel mm: (0.10...1.50) electromagnet>Volt: 12 1/min: 1250 2nd speed mm: 3.30...3.70 TD travel Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 32.0...34.0 > 1000s.: (30.8...35.2) mm: (2.80...4.20) Shutoff electromagnet>Volt: 12 3rd speed 1/min: 2000 5th speed 1/min: 1250 mm: 7.20...8.00 Shutoff TD travel mm: (6.90...8.30) electromagnet>Volt: 12 Del. quantity cm3/: 29.70...30.70 Shutoff 1000s.: (28.00...32.40) electromagnet>Volt: 12 1/min: 500 6th speed Supply-pump pressure characteristic: Shutoff electromagnet>Volt: 12 Del. quantity cm3/: 29.8...32.8 1/min: 500 1st speed Supply-pump 1000s.: (28.3...34.3) pressure> bar: 3.30...3.90 Shutoff electromagnet>Volt: 12 2nd speed 1/min: 1250 Electr. shutoff: Supply-pump bar: 5.70...6.30 pressure> 1st speed 1/min: 400 Del. quantity cm3/: 0.00...3.00 Shutoff 1000s.: (0.00...3.00) electromagnet>Volt: 12 3rd speed 1/min: 2200 Shutoff Supply-pump electromagnet>volt: bar: 8.20...8.80 pressure> Shutoff Damper set qty.: electromagnet>Volt: 12 LFG-setting: Overlow quantity at overflow valve: Idle delivery: 1/min: 500 1st speed 1st speed 1/min: 400 Shutoff Shutoff electromagnet>Volt: 12 : 41.70...86.10 electromagnet Volt: 12 Del. quantity cm3/: 12.0...14.0 Overflow quantity> cm3/10s: (26.70...101.10) 1000s.: (9.0...17.0) cm3/: 2.0 2nd speed 1/min: 2200 Shutoff Dispersion 1000s.: (3.0) @lectromagnet>Volt: 12 : 55.60...139.00 Overflow

High Idle: +	Shutoff
t	electromagnet>Volt: 12
1st speed	
Shutoff +	Part-load del.at 3rd injqty.
electromagnet>Volt: 12 +	terza fermo della portata
Del. quantity cm3/: 8.5010.5	stop (EGR set)
> 1000s.: (5.513.5) +	scarico) (ARF)
1	gaz d'échappement-ARF)
Rest delivery:	Spacing mm: 12.0
11000 400110171	
1st speed 1/min: 500	1st speed
Shutoff	Shutoff
electromagnet>Volt: 12	
	electromagnet>Volt: 12
Del. quantity cm3/: 4.55.5	Del. quantity cm3/: 20.422.4
> 1000s.: (3.07.0)	> 1000s.: (17.425.4)
T	**************************************
Load-dependent start of delivery:	Automatic starting fuel delivery:
<pre>Injqty.dif.measurement:</pre>	
+	1st speed 1/min: 350
1st speed	Shutoff
Injqty. cm3/ : $-5.07.0 #$ +	electromagnet>Volt: 12
difference> 1000s.: - (4.010.0)	Del. quantity cm3/: 20.040.0
Shutoff	> 1000s.: -
electromagnet>Volt: 12	
2nd speed 1/min: 1250 +	2nd speed 1/min: 225
Inj.—qty. cm3/: 2.08.0 " Z	Shutoff
difference> 1000s.: -	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 37.071.0
electromagnet Volt: 12 +	> 1000s.: -
3rd speed 1/min: 1250 +	
Charge press. hPa: ALFB	4th speed 1/min: 100
Injqty. cm3/: 2.08.0 Z	Shutoff
difference> 1000s.: (12 V)	electromagnet>Volt: 12
Shutoff	Del. quantity cm3/: 46.0048.00
electromagnet>Volt: 12	> 1000s.: (39.554.5)
ceeest diagnees vote. 12	1000011 (371311134137
TD-travel dif.measurement:	Shutoff electromagnet:
correttore anticipo iniezione (SV):	Sharoti etectionagnet.
	Curb &m
1st speed	Cut-in
TD-travel : -2.73.7 "	>min voltage : 10.0
difference> mm: -(2.63.8) " +	Rated voltage : 12.0
Shutoff +	
electromagnet>Volt: 12 +	Mounting and assembly dimensions:
2nd speed	
Charge press. hPa: ALFB +	Designation
TD-travel : 0.00.6 +	K mm: 3.63.8
difference> mm: (12 V) +	KF mm: -
	MS mm: 1.31.5
SP pressdif.measurement:	XK mm: MIKRO.
compa di mandata (FP):	XL mm: MASS A=0.8
1st speed 1/min: 1250 +	
Supply pump-	Yb mm: 74.085.0
pressure > : - 0.10.3 # +	- 1
difference bar: - +	Remarks:
Shutoff +	:
electromagnet>Volt: 12	:
2nd speed 1/min: 1250 +	Ya = Distance between VE flange and
Supply pump-	speed-control lever in idle
pressure > : -1.21.8 " +	position
differences have -(1 1 1 9) "	Measurement noint = edge of control

lever on drive end

Yb = Distance between VE flange and speed-control lever in rated speed position Measurement point = edge of control lever on distributor-head end

BOSCH-INJ.-PUMP TEST SPECIFICATIONS Note inst. in remarks column Test scheet : FIA : 11.03.96 Edition replaces Calibrating oil : ISO-4113 Injection pump : VE4/8F2100R679 Type number : 0 460 484 112 Customer Part-No. : Customer-specific information Customer : FIAT : X8/96 M720 DT Engine KW: 54 Power

TEST BENCH REQUIREMENTS

Overflow restricti: 1 463 456 303

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 127.00...133.00

Test ini. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 x Length> mm: 450

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1500

Setting value mm: 5.70...6.10

AFB/AFB

valve > Volt: 12

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

```
Speed 1/min: 1250
Setting value bar: 7.00...7.60
KSB/AFB
valve
               Volt: 12
Shutoff
electromagnet>Volt: 12
Full-load del. with charge press.:
              1/min: 1500
Speed
Del. quantity cm3/
             1000s.: 43.30...44.30
KSB/AFB
valve >
               Volt: 12
Shutoff
electromagnet>Volt: 12
               cm3/: 2.5
Dispersion
  >
             1000s.: (2.5)
Low-idle speed regulation
             1/min: 425
Speed
Del. quantity cm3/
             1000s.: 12.3...16.3
  >
KSB/AFB
          > Volt: 12
valve
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 2.5
            1000s.: (2.5)
Full-load speed regulation
             1/min: 2400
Speed
Del. quantity cm3/
            1000s.: 28.20...34.20
KSB/AFB
          > Volt: 12
valve
Shutoff
electromagnet>Volt: 12
Start:
             1/min: 100
Speed
Del. quantity cm3/: 50.00...80.00
            1000s.: 50.00
mind>
KSB/AFB
              Volt: 12
Valve
Shutoff
electromagnet>Volt: 12
Load-dependent start of delivery:
Inj.-qty.dif.measurement:
             1/min: 1500
Speed
Inj.-qty.
             cm3/
difference> 1000s.: 11.0...17.0 *
```

KSB/AFB

Shutoff

valve

> Volt: 12

electromagnet>Volt: TD-travel dif.measu		‡	1st speed 1/min: Supply-pump	1500
1.Speed 1/min:		†		7.007.60
TD-travel	0.700.90	1	<pre>valve > Volt: Shutoff</pre>	12
KSB/AFB		Ŧ	electromagnet>Volt:	
<pre>valve > Volt: Shutoff</pre>	12	‡	2nd speed 1/min: Supply—pump	1000
electromagnet>Volt:	12	1	pressure> bar: KSB/AFB	5.606.20
Inspection-pump tes	t specifications	+	valve > Volt:	12
Test specifications		İ	Shutoff electromagnet>Volt:	12
Timing-device chara	cteristic:	Ī	3rd speed 1/min: Supply-pump	
1st speed 1/min:		+		8.509.10
	2.404.40 B	+	KSB/AFB	
> mm: KSB/AFB	(1.904.90)	†	<pre>valve > Volt: Shutoff</pre>	12
valve > Volt:	-	1	electromagnet>Volt:	12
electromagnet>Volt:		+	•	
2nd speed 1/min:		+	Overlow quantity at	overflow valve:
	2.002.60 A	†	4-1 1 44-2	400
> mm: KSB/AFB	(1.702.90)	╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌╬╌	1st speed 1/min: KSB/AFB	600
valve > Volt:	-	+	valve > Volt:	12
Shutoff		+	Shutoff	
electromagnet>Volt:		+	electromagnet>Volt:	
3rd speed 1/min:	600	+		41.7086.10
	3.404.40		quantity> cm3/10s:	
> mm: KSB/AFB	(1.904.90)	1	2nd speed 1/min: KSB/AFB	2100
valve > Volt:		Ī	valve > Volt:	12
Shutoff		I	Shutoff	12
electromagnet>Volt:	12	+	electromagnet>Volt:	12
4th speed 1/min:		+		55.60139.00
TD travel mm:	2.903.70	+	quantity> cm3/10s:	(40.60154.00)
	(2.604.00)	+		
KSB/AFB	40	+	Delivery-quant. and	breakaway char.:
valve > Volt: Shutoff		‡		
electromagnet>Volt:		†	1nd speed 1/min:	2800
5th speed 1/min: FD travel mm:	5.706.10	†	KSB/AFB valve > Volt:	10
	(5.30,6.50)	Ι	Shutoff	12
(SB/AFB	(3.300.30)	I	electromagnet>Volt:	12
valve > Volt:	12	1	Del. quantity cm3/:	
Shutoff		1		(0.003.00)
electromagnet>Volt:	12	+	2nd speed 1/min:	2600
6th speed 1/min:		+	KSB/AFB	
	8.509.30	+	valve > Volt:	12
	(8.209.60)		Shutoff	10
(SB/AFB	12	T	<pre>electromagnet Volt: Del. quantity cm3/:</pre>	
valve > Volt: Shutoff	16	I		(8.4018.4)
electromagnet>Volt:	12	I	3rd speed 1/min:	
•		+	KSB/AFB	
Supply-pump pressure	e characteristic:	‡	<pre>valve > Volt: Shutoff</pre>	12

electromagnet>Volt: 12	2 7/2	Del. quantity cm3/: > 1000s:	0.003.00 (0.003.00)
Del. quantity cm3/: 28	26.236.2)	3rd speed 1/min:	
4th speed 1/min: 2	100	KSB/AFB	
KSB/AFB	<u> </u>	valve > Volt:	12
valve > Volt: 12	² †	Shutoff	10
Shutoff	, †	electromagnet>Volt:	
electromagnet>Volt: 1	5 4 15 4 T	Del. quantity cm3/:	
Del. quantity cm3/: 42 > 1000s.: (4	41.345.9)	> 1000s.:	(40.049.0)
5th speed 1/min: 15		Load-dependent start	of delivery:
KSB/AFB	+	Injqty.dif.measure	
<pre>valve > Volt: 12 Shutoff</pre>	2	1st speed 1/min:	1500
electromagnet>Volt: 12	2 +	Injqty. cm3/ :	9.011.0 "
Del. quantity cm3/: 43	3.3044.20	difference> 1000S.:	_
> 1000s.: (4	41.8045.80)	KSB/AFB	
6th speed 1/min: 10	000 +	valve > Volt:	12
KSB/AFB	+	Shutoff	
valve > Volt: 12	2 +	electromagnet>Volt:	12
Shutoff	+	2nd speed 1/min:	1500
electromagnet>Volt: 12	2 +	Inj. qty. cm3/:	2.08.0 # Z
Del. quantity cm3/: 41	1.144.1	difference> 1000s.:	(1.009.00)
> 1000s.: (4	40.344.9)	KSB/AFB	
7th speed 1/min: 60 KSB/AFB	00 🖠	<pre>valve > Volt: Shutoff</pre>	12
valve > Volt: 12	2	electromagnet Volt:	12
Shutoff	<u> </u>	- 1000 i amag. 100 i a cara	
electromagnet>Volt: 12	> 1	TD-travel dif.measur	ement:
Del. quantity cm3/: 40		correttore anticipo	
> 1000s.: (3	39.343.9)	1st speed 1/min:	
, , , , , , , , , , , , , , , , , , , ,			0.500.90 #
	1	difference> mm:	
		KSB/AFB	(0100111110)
Electr. shutoff:		valve > Volt:	12
eccer. shacorr.	1	Shutoff	· ,
1st speed 1/min: 42	25	electromagnet>Volt:	12
Del. quantity cm3/: 0.	00 3 00	e cecer omagnees voce.	1 66
> 1000s.: (0	0.003.00)	SP pressdif.measur	ement.
Shutoff		pompa di mandata (FP)	
electromagnet>volt: -		1st speed 1/min:	
KSB/AFB		Supply pump-	1500
valve > Volt: 12		pressure > : (0.100.30 "
vatve > vott. 12			(0.100.30)
Idle delivery:		Shutoff	(0.100.50)
iate detivery.		electromagnet>Volt:	12
1st speed 1/min: 42		etetti ollagi leti vott.	•••
KSB/AFB		Part-load del.at 3rd	iniatv.
valve > Volt: 12		terza fermo della po	
Shutoff		stop (EGR set)	Cuto
electromagnet>Volt: 12		scarico) (ARF)	
Del. quantity cm3/: 12	•	gaz d'échappement-AR	F)
		Spacing mm:	
Dispersion cm3/: 2.		opening om.	
> 1000s.: (2		1st speed 1/min:	1000
2nd speed		KSB/AFB	, 555
KSB/AFB	-	valve > Volt: 1	12
valve > Volt: 12		Shutoff	1 100
Shutoff		electromagnet>Volt:	12
		Del. quantity cm3/: 7	
electromagnet>Volt: 12	. Т	vec. quantity thos: (

```
1000s.: (6.3...11.3)
Automatic starting fuel delivery:
             1/min: 525
1st speed
KSB/AFB
          > Volt: 12
valve
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 35.00...55.00
            1000s.: -
             1/min: 400
2nd speed
KSB/AFB
              Volt: 12
valve
          >
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 52.00...72.00
            1000s.: -
             1/min: 100
4th speed
KSB/AFB
          > Volt: 12
valve
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 50.00...80.00
            1000s.: -
Shutoff electromagnet:
Cut-in
>min voltage
                   : 10.0
                 : 12.0
Rated voltage
Mounting and assembly dimensions:
Designation
                mm: 3.2...3.4
K
                mm: 4.8...5.0
KF
                mm: 1.1...1.5
mm: 36.0...38.0
MS
Ya
                mm: 63.4...71.4
Yb
Ajustement Potentiometer:
Angle for
                 °: 25.0
          >
pot.
Supply voltage
              volt: 5.0
pot.
     >
Output volt
              volt: 2.04
pot.
Remarks:
Ya = Distance between VE flange and
speed-control lever in idle
position
Measurement point = edge of control
lever on drive end
```

Yb = Distance between VE flange and speed-control lever in rated speed position
Measurement point = edge of control lever on distributor-head end

Note inst. in remarks column

Test scheet : REN : 08.12.92 Edition

replaces

Calibrating oil : ISO 4113

Injection pump : VE4/9F2200R153-2

Type number : 0 460 494 303

Customer-specific information

: RNUR Customer

: J8S - 738 Engine

TEST BENCH REQUIREMENTS

Calibrating-oil return>temp. > °C

with>thermometer> : 40.00...48.00 Electronically> : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder

assembly> : 1 688 901 022

Opening

Pressure> bar: 130...133

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00 x Wall>thickness : 2.00 mm: 450 x Length>

Start of delivery Prestroke mm: -(from BDC): -

Injection-pump setting values Test specifications in parentheses

Timing-device travel

1/min: 1400 Speed Charge press. hPa: 800

Setting value mm: 4.00...4.40

Shutoff

electromagnet>Volt: 12

Supply-pump pressure

1/min: 1400 Charge press hPa: 800

Setting value bar: 5.10...5.70

Shutoff

electromagnet>Volt: 12

Full-load del. with charge press.:

1/min: 1400 Speed Charge press. hPa: 800 Del. quantity cm3/

1000s.: 47.00...48.00

Shutoff

electromagnet>Volt: 12 cm3/: 2,5 Dispersion 1000s.: (3.0)

Full-load del. w/out charge press.:

1/min: 600 Speed Del. quantity cm3/

1000s.: 37.00...38.00

Shutoff

electromagnet>Volt: 12

Low-idle speed regulation

1/min: 425 Speed

Del. quantity cm3/

1000s.: 7.00...11.00

Shutoff

electromagnet>Volt: 12 Del. quantity cm3/: 2.5 1000s.: (3,5)

Full-load speed regulation

1/min: 2400 Charge press hPa: 800 Del. quantity cm3/ > 1000s.: 23.00...29.00

Shutoff

electromagnet>Volt: 12

Start:

1/min: 100 Del. quantity cm3/: -1000s.: 60.0 mind> Shutoff

electromagnet>Volt: 12

Inspection-pump test specifications Test specifications in parentheses

Timing-device characteristic:

1/min: 2000 1st speed hPa: 800 Charge press

mm: 6.20...7.00 TD travel

electromagnet>Volt: 12

2nd speed 1/min:		+	point> hPa:	200
	800	+		4.5
TD travel mm:	4.004.40	+	Shutoff	
> mm:	(3.504.90)	+	electromagnet>Volt:	12
Shutoff		+	Del. quantity cm3/:	
electromagnet>Volt:	12	+		(38.5044.50)
3rd speed 1/min:		1	2nd speed 1/min:	
Charge press hPa:		1	Charge press. hPa:	
	1.902.70		Shutoff	600
> mm:	(1.603.00)	T		12
	(1.005.00)	T	electromagnet Volt:	
Shutoff	42	Ť	Del. quantity cm3/:	
electromagnet>Volt:	12	t	> 1000s.:	
4th speed 1/min:		+	3rd speed 1/min:	
Charge press hPa:		+	Charge press. hPa:	800
	5.706.50	+	Shutoff	
> mm:	(5.406.80)	+	electromagnet>Volt:	12
Shutoff	•	+	Del. quantity cm3/:	
electromagnet>Volt:	12	1	> 1000s.:	
o to the single services		1	4th speed 1/min:	
Supply-pump pressur	a characteristic:	1	Charge press. hPa:	
anthey hamb by essur	e character iscit.	T	Shutoff	800
Ant annual Almina	2000	T		10
1st speed 1/min:		+	electromagnet>Volt:	
Charge press. hPa:	800	†	Del. quantity cm3/:	
Supply-pump		+		(22.0030.00)
pressure> bar:	6.907.50	+	5th speed 1/min:	
Shutoff		+	Charge press. hPa:	800
electromagnet>Volt:	12	+	Shutoff	
2nd speed 1/min:	1400	+	electromagnet>Volt:	12
Charge press. hPa:		1	Del. quantity cm3/:	
Supply-pump		1		(42.1046.70)
pressure> bar:	5.105.70	1	6th speed 1/min:	
•	5.105.10	T		
Shutoff	13	T	Charge press. hPa:	000
electromagnet>Volt:	12	Ť	Shutoff	40
3rd speed 1/min:		†	electromagnet>Volt:	12
Charge press. hPa:	800	+	Del. quantity cm3/:	
Supply-pump		+		(45.2049.80)
pressure> bar:	2.703.20	+	7th speed 1/min:	1000
Shutoff		+	Charge press. hPa:	800
electromagnet>Volt:	12	+	Shutoff	
order amagnet	-	1	electromagnet>Volt:	12
Overlow quantity at	overflow valve:	1	Del. quantity cm3/:	44 90 47 90
over tow quarterty at	Over teem valve.	\perp	> 10005	(43.4049.40)
1st speed 1/min:	400	T		
		T	8th speed 1/min:	
Charge press. hPa:	-	Ť	Charge press. hPa:	_
Shutoff	40	†	Shutoff	
electromagnet>Volt:		+	electromagnet>Volt:	
	41.683.3	+	Del. quantity cm3/:	
quantity> cm3/10s:	(26.698.3)	+	> 1000s.:	(34.5040.50)
2nd speed 1/min:	2000	+		
Charge press. hPa:	800	+		
Shutoff		1		
electromagnet>Volt:	12	1	Electr. shutoff:	
	55.5138.8	1	Ecoci. Silatori.	
quantity> cm3/10s:		1	1st speed 1/min:	1.25
quantity> cm3/rus:	(40.5154.0)	T		
- 1 1	h	T	Charge press. hPa:	
Delivery-quant. and	preakaway char.:	+	Del. quantity cm3/:	U.UU3.UU
		+	> 1000s.:	-
		+	Shutoff	
1nd speed 1/min:	700*	+	electromagnet>volt:	12
Charge-air pressure-	-setting	+		

```
Idle delivery:
           1/min: 425
1st speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 7.00...11.00
             1000s.: (5.00...13.00)
             1/min: 660
2nd speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 0.00...3.00
            1000s.: -
3rd speed
             1/min: 520
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 3.00...7.00
             1000s.: (1.00...9.00)
Automatic starting fuel delivery:
1st speed
             1/min: 300
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 20.00...40.00
            1000s.: -
             1/min: 180
2nd speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 40.00...100.00
            1000s.: -
             1/min: 100
3rd speed
Shutoff
electromagnet>Volt: 12
Del. quantity cm3/: 60.00...100.00
            1000s.: -
Shutoff electromagnet:
Cut-in
>min voltage
                  : 10.0
                  : 12.0
Rated voltage
Mounting and assembly dimensions:
Designation
                mm: 3.2...3.4
K
KF
                mm: 5.6...6.0
MS
                mm: 1.3...1.7
                mm: 3.6
SVS max.
                mm: 4.5
LDA stroke
                mm: 17.0...19.0
XK
                mm: 10.3...13.7
XL
Remarks:
* Correction at adjusting nut
```

manifold-pressure compensator pressure change.

N19

Operate control lever after each